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THE COMING ST. LOUIS EXPOSITION.

WHILE THE INDIA RUBBER WORLD was in press last month the ceremonies were in progress at St. Louis of dedicating the extensive buildings constructed for the use of the Louisiana Purchase Exposition, to be held next year. The occasion was also the centennial anniversary of the purchase from France of the vast domain west of the Mississippi which now forms so important a part of the United States. No greater work of colonization or civilization has been accomplished in the history of the world, in so short a time, than in the building of the great states which now exist where, a hundred years ago, there was only a wilderness. While this paper is in press another celebration is just closing—that of the 250th anniversary of New York as a city. In 1653, when the city was founded by a Dutch charter, with 1000 inhabitants, on the island of Manhattan, then lately purchased from the Indians for $24, the most of the North American continent above Mexico was practically a wilderness. To day New York ranks second among the cities of the world in population and wealth, and is growing at a greater rate than any of the other leading capitals. Nor is this growth at the expense of any other part of the country, but rather is it an exponent of the development of the United States as a whole.

It is true that St. Louis has been chosen as the site of the next great world's fair to celebrate the growth during the century of the great Central West, but it will be none the less a thoroughly American undertaking, representative of the whole country's progress. And this progress, for many reasons, has become a matter of vastly more concern to the rest of the world than in any past era, for which reason the industries abroad in which Americans have become competitors in the world's markets promise to be more fully represented at St. Louis than at Philadelphia in 1876, or at Chicago ten years ago. Though such considerations may be less appreciated here than in some other countries, the mere fact of the United States government being more intimately associated with the direction of the St. Louis fair will tend to give the occasion greater dignity in foreign eyes than any other of our great expositions, and lead to more liberal exhibits from abroad. But apart from this, the industrial progress made by the United States since the Chicago fair, and the increased importance which this has given us as a trading power, will invest the St. Louis exposition with an interest abroad never before felt in an American occasion of the kind—an interest manifested by both foreign exhibits and foreign visitors.

The India-rubber industry here has not been adequately represented in several extensive expositions held in the United States, and it might be suggested that it may be a mistaken idea for rubber manufacturers to class the coming event at St. Louis with some former fairs. The rubber industry here is now in a position to engage in export trade more extensively than ever before, and the St. Louis exposition should be taken advantage of for advertising this fact. It should lead to a new era in the American rubber industry.

THE BOOM IN SMALL MOLD WORK.

IT was estimated ten years ago that the number of steam presses used in the manufacture of small molded articles in rubber in the United States was about 700; to day there are more than 2000. As a rule the business attaches itself to those factories that make mechanical rubber goods, but it also grows up gradually in plants that are devoted primarily to the manufacture of tires, druggists' sundries, etc. It is a very rare occurrence, however, when any of the producers of dry heat goods, such as boots and shoes, mackintoshes, or insulated wire, create such a department.

The remarkable growth of this line points to many conditions favorable both to the rubber business and to general industrial conditions. There is hardly a line of manufactured goods, of machines, of tools, or of artisans' creation, that does not call for some supplementary part made of rubber and for which there is no practical substitute. To a very large extent these supplementary articles of rubber are molded. Furthermore, every day adds to the list of such articles and the business grows quietly, but none the less vigorously.

It is by and large a very satisfactory business, for it means the development of a special knowledge of fitness in compounding and cure, as well as much experience and accuracy in the planning of molds, estimating of shrinkages, and economy in waste and handling. Nor is it a bad class of customers to have on one's books, for risks are distributed over a large territory, covering such a multitude that it would take a financial cyclone to involve the manufacturer in serious loss.

SURFACE CLOTHING AGAIN IN FAVOR.

THERE are not wanting those who predict that the gossamer garment for both sexes will one day come back to favor and be as popular as it was a score of years ago. However this may be, it is certain that regulation surface clothing that for a time almost disappeared as a trade factor, has taken on a new lease of life, and if conditions continue will in a brief time be in as healthy a condition as ever. A potent reason for its decline lies, beyond the question of a doubt, in the fact that under the spur of fierce competition certain manufacturers burdened the rubber with a larger percentage of compound than it could stand and still retain its wearing and rain-resisting qualities. After a time such of the public as could find a substitute for rubber garments either in oil clothing, mackintoshes, shower proof goods, etc., forsook rubber entirely. The poor goods soon disappeared from the market, that is to a degree, while of better goods there was a fair and steady demand. Each one of these good garments has during the past few years been acting as a trade missionary to bring its type back into favor. Apparently the work has been in a measure successful, and there is no reason why sales cannot be constantly increased and the line remain in permanent favor if only good goods at fair prices are furnished.

ONE MAN AND A GOING CONCERN.

ALL trades have him; yea, all professions. He may in a manufacturing proposition be manager, superintendent, or valued foreman, or even a skilled workman in charge of some special process. Whatever place he fills it is his belief and often that of his associates that he is absolutely indispensable, that if he were to leave all would go wrong, that dry rot would begin and the business shrink and shrink until it perished or he came back.

As a matter of fact, such an individual does not exist except in the imagination. No individual is necessary to the world's progress, happiness, or stability. Death teaches that daily by removing the human props to all sorts of enterprises, which if worthy stand just the same, nay, often are more firmly placed, more ready to expand along natural lines.

One has but to look back at the brilliant minds that once dominated the rubber trade, now passed beyond, to feel how futile it is for any one to arrogate to himself a position that cannot be filled by another.

Nor do the real leaders indulge in such self deception. It is the man of moderate attainment, of huge vanity, who believes that his resignation will stop the wheels of progress, that the house for which he has labored and helped to establish will fall unless his shoulder be under it. The chances are it will take a new lease of life, and the falling will come within his province.

This is not penned as a discourager to ambition, or to any who do not deserve it, but is simply a bit of thinking done on paper following the visit of one who is going to leave his old concern and carry his knowledge to a rival. The bet is that the former profits and the latter loses. Any takers?

THE RUSH FOR GARDEN HOSE.

THREE weeks ago—in fact, ever since the hose season opened—it looked as if sales were to be light, and in consequence manufacturers did not stock up as they have been wont to do. With the advent of the sudden warm weather, however, and the drouth that extends over a very large area of the United States, has come a flood of hurry orders that have started every hose machine to running at its full capacity. This condition of affairs is both satisfactory and provoking. It means to the jobber and manufacturer a greater output, to be sure, but it also involves for the former a vexatious wait for goods, and to the latter greater cost in manufacture on account of extra pay for "overtime" workers, a higher price for cotton duck, and hindrance in other departments. As no weather prophet has yet qualified who has the confidence of this portion of the trade, is not the next best thing to strike an average of hose consumption for say ten years back, allow for increase of populations having waterworks, and both buyer and maker base the output on such estimates?

CEYLON RUBBER AT THE CUSTOM HOUSE.

THE report that a government chemist in New York has discovered traces of sulphur in Ceylon rubber, and thus classed it among manufactured products, and therefore subject to a duty of 30 per cent. *ad valorem*, would be amusing, were it not that it may prove troublesome to both importers and rubber manufacturers. Many people of course will be doubtful as to whether any trace of sulphur was found in the rubber, in spite of the care with which the analysis was probably conducted. It is perfectly possible, however, that a certain amount of sulphur was found there, as Collins, in his work on

India-rubber, which is regarded very highly by the British, specifically advises the use of sulphur fumes in the coagulation of the *latex* of the *Hevea*. The fact of traces of sulphur coming from such fumes, used in coagulation, however, should not hinder such rubber from being classed as crude rubber, pure and simple. If it did, the presence of creosote from the smoke of the palm nut used in curing fine Pará rubber, the presence of alum in the Centrals, or of uric acid in the Africans that have been dried on the epidermis of the negro gatherers, should place all of these kinds in the class of manufactured rubber. The customs decision of course will not be sustained, for to begin with, the thought of the chemist is that the rubber has been compounded, and yet any manufacturer can prove to him that a "trace" of sulphur would never suffice to cure pure Pará rubber. Had he found 10 per cent. of flowers of sulphur mixed with the rubber, it would be altogether a different proposition. In the meantime, it behooves the importers to deal gently with the misguided chemist—indeed, to compliment him upon his efficiency in examining every new type of rubber that comes into the market, for the more he knows about such goods, the less often is he likely to err as he has in this case.

A TAIL HOLD AND A DOWN-HILL PULL.

FROM Colorado Springs (Colorado) comes a report on a new substitute for India-rubber made from the skin of the "humble hog," referred to hereinafter as "h. h." According to the *Gazette* of the city mentioned, the inventor, a canny Scot, has been "hailed by scientific men and manufacturers with open arms, as his discovery makes less potent the fear that the world's supply of rubber will disappear." The h. h. is apparently the only interested party that has not thus hailed this new revolutionizer of the crude rubber supply. Specific details are not yet vouchsafed as to the process, except that the finished product emerges from a hydraulic press which expresses all moisture and air. The removal of last named element is of prime importance, for were the squeal of the h. h. to remain in product, it would give an embarrassing prominence to such goods as it entered into. Imagine an elegant automobile racing up the Fifth avenue, in New York, to the music of four plump h. h. tires! The inventor says further: "This substitute you will find will take the place of rubber, as it is more durable, has the same elasticity, and is not at all prohibitive in price. Much more compact and gristly than the skin of any other animal it resists the severe attrition on a rough road in a unique manner." [So does the h. h.] In fact the new substitute fairly "bristles" with value.

THE RUBBER INDUSTRY IN NEW JERSEY is one of those upon which the statistical office in that state reports every year in much detail. From the official figures given on another page of this Journal, for three years past, it would appear that there has been an annual increase in the amount of capital employed in the industry, in the value of materials used and of goods made, in the amount disbursed for wages, in the number of employés, and in the number of days the rubber factories were in operation. Presumably there was an increase also in the profits of the manufacturers, though this is a point not covered by the statistician. There is one respect, however, in which the improvement made in recent years is beyond question—the reputation of Jersey rubber goods. In times past many kinds of rubber goods have been made in New Jersey. Certain factories were operated for the purpose of placing on the market rubber goods at a lower price than was charged for the standard products of the leading factories elsewhere, with such results in the matter of quality in some cases as to justify the use of the description "Made in Jersey" as a term of reproach. Ultimately, however, the trade generally learned to appreciate that a legitimate demand might exist for different grades of rubber goods, at correspondingly different prices, until the manufacture of cheap goods was no longer confined to New Jersey. On the other hand, the factories in that state found outsiders competing with them in their own distinctive lines of production. Then the New Jersey manufacturers began catering to the better classes of trade, with such success that to-day no better goods are made in any state, and no buyer now distrusts an article in rubber because it is "made in Jersey," or accepts it without hesitation because produced elsewhere.

ATTENTION IS AGAIN BEING CALLED to the unattractive lot of the rubber gatherers of tropical Africa. There can be no doubt that, left to their own choice, the Congo natives would prefer to leave all the rubber in the forest. But since these simple minded people either won't be or can't be civilized—though it may seem a harsh statement of the question—their choice in the matter doesn't count. So-called civilized nations, however, owe it to themselves not to become parties to a policy of killing these ignorant human creatures simply because ordinary inducements do not stimulate them to gather rubber. As to the conditions in Africa, the world has heard of them for years, through religious missionaries and the British Aborigines Protection Society, for example, but nobody seems to have proposed any practical means of reform. Meanwhile, if Captain Burrows's book is to be believed, the situation is working out its own cure. That is, all the rubber is becoming exhausted, and many of the natives are being killed, so that, in a few years, the "Curse of Central Africa" will be only a memory.

BUSY AND CHEERFUL AT EIGHTY YEARS.

IN a letter from Dresden to THE INDIA RUBBER WORLD, Mr. L. Otto P. Meyer, whose celebration of his eightieth birthday was noted recently in these pages, writes:

"Does it not make you feel good to be in correspondence with a man of eighty years, who does not think himself old? I have enjoyed good health all my life; have never been sick since my childhood, except that forty years ago I stayed eight days in bed. And now at eighty I feel strong and sprightly as a man of thirty, but my hair is pure white. I hope by the grace of our Lord to live a good while longer, and you may probably see me arriving some day in America. I am always busy with one thing or another, and disdain to effeminate myself; it seems I am well vulcanized."

Mr. Meyer was a younger brother of the head of the firm of Meyer & Poppenhusen, out of whose enterprise grew the India Rubber Comb Co., and first came to America in 1848 in their interest. Mr. Meyer mentions in his letter that fifty years ago, when Mr. Poppenhusen settled at College Point, New York, the present site of the largest hard rubber factory in existence, the place consisted of a single farm.

JOHN MUIR, head of John Muir & Son, Leith, Scotland, while lately at Colorado Springs, Colorado, made a statement which has found its way into the newspapers of the United States generally, to the effect that he had invented a process for tanning pigskins so as to make them suitable for tires, and he predicted that they would soon displace rubber for tire work. He stated that he had sold his patent rights for the United States, Germany, Austria-Hungary and Switzerland.

LITERATURE OF INDIA-RUBBER.

LES PLANTES A CAOUTCHOUC ET A GUTTA. EXPLOITATION, Culture, et Commerce dans tous les pays chauds. Par Henri Jumelle. Paris: Augustin Challamel. 1903. [Paper. 8vo. Pp. XII + 542. Price 12.50 francs.]

THE author of this work, adjunct professor in the faculty of sciences at Marseilles, in charge of the study of colonial vegetable products in connection with the chamber of commerce in that city, has long since become recognized as an authority in his special field. The present is an outgrowth of a smaller work from the same pen, five years ago, on the Caoutchouc and Gutta-percha species of the French colonies. In his new work Professor Jumelle deals first with the nature of Caoutchouc and of *latex* and methods of its collection and coagulation, after 385 pages are devoted to an enumeration of Caoutchouc species, including a description of each, its geographical distribution, its yield, character of product, etc. The remainder of the volume is devoted to a similar treatment of Gutta-percha species. Fifty-seven illustrations and a good index add to the completeness of the work.

A TRAVERS L'AMERIQUE ÉQUATORIALE. L'AMAZONIE. PAR Auguste Plane, Chargé de missions commerciales. Paris: Pion-Nourrit et Cie. 1903. [Paper. 16mo. Pp. XIII + 284 + 15 plates and map. Price, 4 francs.]

NO other single work in our knowledge contains so much definite information regarding the principal rubber producing region of the world, with notes on the people, conditions of work and trade, river transportation systems, and, particularly, the location of the rubber forests and the details of collecting and marketing rubber, as the book above named. The book records the experiences and observations of a competent authority, who has spent several years in the Amazon valley, and the book is thoroughly up to date, recording events up to the end of the past year. One point to be noted is the inclusion in the book of the Brazilian laws relating to concessions of rubber lands. A number of half tone views relate to rubber working methods, and to life on the Amazon and its chief tributaries. This is a companion volume to "Le Perou," by the same author, noticed in THE INDIA RUBBER WORLD for April.

LE CAOUTCHOUC AU RIO-BENI. NOTES SUR LA VEGETATION ET l'Exploitation de l'*Hevea* en Bolivie. Par P. Cibot. Paris: 1903. [Reprinted from the *Journal d'Agriculture Tropicale*. Large 8vo. Pp. 12.]

THIS is a comprehensive summary of the observations of its author during six years spent in the rubber regions of Bolivia, giving many details as to the number of trees in a given area, rate of yield, methods of preparing the product, etc. It is interesting to note that though the author has been surrounded all these years with such immense natural supplies of rubber, including large areas not yet exploited, his work closes with the assertion that the future dependence of the world for rubber must be the cultivation of this product, on account of the decreasing yield of the *Hevea* trees under constant tapping.

NOTES ON BOLIVIA. COMPILED AND PREPARED FROM DIFFERENT Sources. By Pedro Suarez, A. M. I. C. E., Consul General for Bolivia in Great Britain. London: Unwin Brothers, Limited, 1902. [Paper. 8vo. Pp. 79. Price, 1 shilling 6 pence.]

A CONVENIENT handbook of information for intending investors, with maps and illustrations. The author says in his preface: "I have gone into the rubber industry in considerable detail, as I come from the districts where it is the chief occupation."

IN CURRENT PERIODICALS.

MULTIPLICATION de la Liane à Caoutchouc *Landolphia Owariensis*. By Georges Le Testu. [By means of slips, or by "marcottage"; germination of the seeds is uncertain.]=*Journal d'Agriculture Tropicale*, Paris. III-22 (April 30, 1903.) Pp. 992-101.

L'Hevea sur le Rio Marcapata (Pérou). By P. Cibot. [Review of a recent work by Auguste Plane.]=*Journal d'Agriculture Tropicale*, Paris. III-22 (April 30, 1903.) Pp. 110-111.

THE DATING AHEAD EVIL.

TO THE EDITOR OF THE INDIA RUBBER WORLD: While the writer does not want to be quoted by name, he cannot refrain from expressing his appreciation of an editorial article which appeared in the May 1 issue of your paper. We refer to that which passed upon the practice of many rubber concerns of dating ahead. The article was timely and necessary and we believe is calculated to do a lot of good. In our opinion oft times a concern is its own worst and perhaps almost sole competitor in such practices, inspired frequently by the misstatements of a salesman who must give some excuse for failing to secure business on regular lines. We are convinced that individual effort of the character recommended by you will accrue to the benefit of the individual and of the trade at large.

A MANUFACTURER.

May 11, 1903.

NEW TRADE PUBLICATIONS.

THE MEIJI RUBBER MANUFACTURING CO. (Tokyo, Japan) send as a Price List (printed in Japanese and English) of a line of their products in mechanical rubber goods, with illustrations of delivery hose, garden hose, steam hose, suction hose on spiral wire, air brake hose, armored hose, hydraulic hose, belting (round and square edge), packing, valves, buffers, body blocks, stoppers, truck tires, gage glass washers, rubber covered rollers, balls, mats, matting, and interlocking rubber tiling. H. Isono & Co., 12, Nichome, Ginzu, Japan, are sole agents. [8⅞" × 6". 24 pages.)

VOORHEES RUBBER MANUFACTURING CO. (Jersey City, New Jersey), makers of a full line of mechanical rubber goods, describe the same in a well got up catalogue that tells prospective buyers just what they need to know about the goods offered. Prices are given, and the illustrations are both numerous and notably good. [4⅛" × 6¼". 112 pages.]

THE BERLIN RUBBER MFG. CO., LIMITED (Berlin, Ontario) send us their fourth annual illustrated catalogue and price list of Rubber Boots and Shoes, for 1903 04, covering, besides their regular first quality and second quality brands, a special quality in lumbermen's goods, marked "Duck Neverbreak." The "Berlin" rubber heels are also listed in this book. [3⅜"× 8¼". 56 pages.]

THE GOODYEAR TIRE AND RUBBER CO. (Akron, Ohio) issue a new edition of "How to Repair Tires," including incidental descriptions of all the types of tires manufactured by this firm, with illustrations. [3⅞"×5". 39 pages.]

JENKINS BROTHERS (No. 71 John street, New York) issue a copyrighted brochure, "Points on Packing," dealing with the unvulcanized India rubber packing which this firm originated more than 25 years ago. [3⅜"×6¼". 16 pages.]

MERCHANTS RUBBER CO. (No. 72 Reade street, New York), successors to William Morse & Co., with Mr. Morse as president, issue a neat illustrated catalogue of rubber clothing and mackintoshes, of which they handle a very full line, from a leading factory. [5¼"×6¼". 46 pages.]

THE R. H. SMITH MANUFACTURING CO. (Springfield, Massachusetts) issue their Catalogue No. 29 of outfits for making Rubber Stamps, including their patented Vulcanizers, a new type of which is herein illustrated for the first time. [6"×9". 12 pages.]

ALSO RECEIVED.

MULCONROY CO., INC., Nos. 1213-1215 Market street, Philadelphia. =Piston Packings. 16 pp.

Jones Combination Rubber Heel Co., No. 39 Vesey street, New York. =Jones's Combination Heels. 8 pp.

RUBBER PLANTING ON THE ISTHMUS OF TEHUANTEPEC.

As Seen by the Editor of "The India Rubber World."

SECOND LETTER.

A Prosperous Private Plantation.—Hunting for Barren Rubber Trees.—Planting in Favorable and Unfavorable Locations.—Conditions for Successful Planting.—The Dry and Rainy Seasons.—Visits to Neighboring Plantations.—"Ixtal."—Snakes.—"La Junta."—The Agricultural "Mozo."—Negro Laborers.—A Midnight Ride.—Freedom from Plant Pests.

THE site of the plantation "La Ventura" five years ago was virgin forest. At that time Mr. James C. Harvey and his son Clarence purchased for themselves and their associates (a private corporation) 1000 acres of land and prepared to develop it along the most practical lines. When the senior of the two first came to Mexico it was with the idea of planting coffee, but after months of study and a personal inspection of most of the Isthmus country he decided that India rubber offered the best opportunity for profit, and therefore has turned the larger part of his land into a plantation of *Castilloa elastica*. I am enlarging upon this a trifle because, to my certain knowledge, the gentleman under consideration is not only an expert horticulturist and botanist, but has studied tropical agriculture in Central and South America, and in the East Indies and West Indies, and beyond this he and his associates offered no stock for sale, but went into the business to make money out of their own investment of capital, energy, and knowledge. Such a plantation must, without fail, give the visitor the best possible view of the practical end of the business. There are, of course, many such private estates in the tropics, but it happened that this was the one that I knew most of and to visit which I had a most cordial invitation.

"LA VENTURA."

"LA JUNTA" RUBBER TREE 27 MONTHS OLD FROM SEED.

Here I was, therefore, installed in the palm thatched house, with its earthen floor and bamboo walls, that for five years had been the home of these hardy pioneers. The domicile was situated at one end of a long ridge, on each side of which, with a rare eye to effect, were planted gorgeous flowering and foliage plants, and trees valuable for fruit and for ornament. Very modestly the presiding genius showed me sixty-five different species of palms, probably the largest collection in the Americas. Not only were there palms native to the tropical parts of America but there were specimens from Java, Ceylon, New Guinea, Queensland, the Fiji islands, New South Wales, and a score of other remote places. These were gathered, not as part of the planting proposition, but from a plant lover's interest alone, which they seemed to appreciate by growing luxuriantly.

Then too, I must not forget the collection of orchids that hung from the bamboo lattice outside of the house, and clung to the trees on all sides; nor the orange, lemon, lime, grapefruit, banana, and plantain trees, a notable part of the garden equipment. I looked with interest also on the vanilla vines, the cacao plantation, and the twenty-five varieties of pineapples, but my chief thought was rubber and so, I soon found, was his. I do not wish to make my planter friend blush, but when I found the work he was doing, how widely he was consulted by planters both in Mexico and in distant tropical lands, I was more than ever impressed with my wonderful luck in thus "striking oil" when first I began to bore. So I asked questions, and questions, and questions, and took notes most copiously all the time.

ONE of the first points that I wanted settled was, whether here or elsewhere, there were *Castilloa* trees either wild or cultivated, that did not yield *latex*. So we both started out to find one such tree, by cutting the outer bark—indeed during all of the trip I cut trees by the hundred just to prove this point—but found none except in one instance, which will be related later. I was much interested also to note the differences in the *latex* as it issued forth. In some instances the tree would send forth a perfect shower of milkwhite drops, which coagulated rather slowly, while another near by would exude a thicker fluid that began to coagulate almost immediately. The natives claim that this latter tree is simply so rich in rubber that it retards the flow, and that, after a little tapping, it corrects itself and the *latex* becomes more fluid.

YIELD OF LATEX.

The younger trees all gave out abundant *latex*, but those that were less than four years old gave a milk that seemed immature; that is, it did not coagulate into dry hard rubber but remained quite sticky. I noted also a curious thing in connection with this, which was that in the younger trees the *latex* began to mature first near the base of the tree, while up toward the branches it still remained of the sticky sort. But we found no trees in this district that did not yield *latex* abundantly.

At "La Ventura" I was able to institute some exceedingly interesting comparisons between the growth of the rubber tree under favorable and unfavorable conditions. In both cases the trees were *Castilloas* planted from selected seed. In the first instance they were planted in the open, about 9 feet apart, on rolling land which had good drainage. Measuring the circumference of the trunks a foot above the ground, I got a fair average of 23.3 inches, and an estimated average height of 22 feet. The banner *Castilloa* was a seedling planted in the open that measured 32 inches in circumference and 25 feet high. All of these trees had every appearance of health and vigor and gave forth milk abundantly. From the records shown me, they were a trifle over four years old. In the second instance, grown in partial shade, such as produced fine cacao, with the land more level and not well drained, the trees being planted at exactly the same time, and from the same lot of seed, I got an average of 4.6 inches for circumference a foot above the ground, and an average height of 6 feet. Anyone would not seem to need a

"LA JUNTA." HEADQUARTERS OF THE PLANTATION COMPANY.

more graphic illustration than this of the necessity for observing proper conditions in planting, and further, as a warning against planting in badly drained land or in the shade.

It is well to note that where these failures appeared there were several wild rubber trees that we estimated to be 25 or 30 years old. They seemed to be perfectly healthy and bled freely. The only reasonable explanation of this is that they were seedlings that grew up slowly in the densest sort of forest when the tremendous surface growth was so luxuriant as to be able to partially drain the ground through its great leaf areas and also lift and make it porous by the leverage of myriads of thrusting roots. The partial clearing of the land later stopped most of this aërial drainage and the subsequent rotting of the roots allowed the ground to sink into a solid, water-sodden mass.

SOIL.

THE land at "La Ventura" seemed to be first leaf mold, then a rich yellow loam three or more feet deep, and under that a blue clayey ooze, as if from the bottom of a tropical ocean bed. It was rolling land as a rule, very well drained, and capable of growing almost any tropical product. The *Castilloa* orchard, through which I tramped many times, had in it about 240,000 trees, from one to four years of age. All of them were planted from the seed, except a small percentage taken from nursery stock to make up for the occasional failure of a seedling.

One result of my early observation, and one that grew with each day's experience, was the conviction that a knowledge of climate, rainfall, soils, drainage, etc., is an absolute necessity from the beginning in the selection of suitable sites for rubber plantations. In other words, the expert tropical agriculturist, well equipped with common sense, is most likely to be the one who starts right. For example, one plans to plant the *Castilloa*. It is a soft wood tree, a tree that from its physical formation is not built to stand high winds, that with its long taproot must have a deep, rich soil and well drained withal. It is a deciduous tree, which means that at a certain time each year it encourages the presence of the sun's rays on its trunk and limbs. The prospective planter should, therefore, pick out land that is covered with a growth of soft rather than hard wood trees, as the latter points to gravelly soil instead of clayey loam. It should be rolling land, or at least land that is naturally well drained. It should be soil that will give the tree plenty of moisture during the dry season and yet that will not be soggy during the wet. For a running rule there should be at least four feet of drainage soil. In the clearing of the land, if there are not natural windbreaks, a certain amount of forest should be left standing to act as such. Referring again to the long taproot of the *Castilloa*, it is said that as the tree grows older it often disappears, its place being taken by large laterals.

RAINY SEASON.

I STRUCK the *Tierra Caliente* just at the beginning of the dry season, and therefore was curious to know exactly what the rainy and dry seasons consist of in the tropics. Of course, no general answer could be given, as in different tropical regions these seasons have their own idiosyncracies. I believe I had but little idea of what the weather really was in the rainy season, whether it rained all the time or was partly rainy and partly clear, and this is what I learned. In the state of Vera Cruz the dry season runs roughly from February to June. During the latter part of May there are about three weeks of genuine hot, dry weather. Prior to this, what is really the dry season is often broken by rainfall; in fact it rains a little about half the time. Beginning with the first of June, however, and lasting until the first of September, come the torrential rains, except that there is in August a week or ten days of dry weather. Nine days out of ten during the tor-

"LA JUNTA." RUBBER PLANTATION SEEN FROM MAIN TRAIL.

"LA FLORENCIA." TRAIL THROUGH FOREST GROWTH.

rential rains the morning breaks bright, clear, and sunshiny. Then in the early afternoon heavy thunder is heard, followed by the roar of the rain through the forest, the water falling in sheets from one-half to one and one-half hours. It also rains regularly during the night.

When night fell at "La Ventura" we all went indoors, for beautiful though the tropical moonlight is, fevers are most easily caught after sundown and particularly if one sleeps out in the open. In fact, native or planter will do almost anything rather than thus expose himself. We did sit in the doorway for awhile and drink in the glorious view of tropical luxuriance, made almost as light as day by the full moon, yet softened to a weird rich beauty that the northern climes cannot equal.

A TROPICAL HOME.

FOR the first time in my life I slept under a gracefully draped series of muslin curtains. As there were no mosquitos I thought it rather unnecessary until my host said that although the country was a paradise, centipedes, small snakes, and tarantulas sometimes dropped from the inside of the thatched roof, and while they were not as poisonous as many thought I might not care to share my couch with them. I slept under a blanket, it was so cool, and awoke to find awaiting me, at the end of a palm thatched corridor, a fine shower bath. Few planters have them, but Mr. Harvey's English blood, so it is said, impelled him to build this before he had a roof on his house. It was certainly a great luxury, and one to which my thought often turned when later I awoke from a night's alleged sleep in a passenger coach or native hut.

"LA JUNTA." CORNER OF RUBBER FIELD ONE YEAR OLD.

The day was Sunday and we had coffee and rolls soon after rising, and breakfast about 12, as is the custom of the country. In the afternoon many neighboring planters rode over, on horses or mules, and discussed crops, asked the news from the outer world, and were most cordial in their invitations to me to visit their places, and it was with the greatest regret that I was able to avail myself of only a few of these privileges.

It was during this social Sabbath that I renewed a pleasant acquaintance with the two Fish brothers, Wisconsin Yankees who were looking at land in that region and who, I believe, finally purchased the "La Florencia" estate, said to have the oldest cultivated rubber in that district. They were hustling about, seeing things in a jolly breezy fashion that made them most welcome, and they helped me exceedingly by giving me excellent photographs of nearby estates that I did not have an opportunity to visit.

When first I struck "La Ventura" I must confess that the languor of the climate, or else my own innate laziness, led me to take things very easy. The hammock in the family room was most inviting, and in spite of the fact that "Loro," the green parrot, watched until I napped and then climbed down from the rafters and gave me a friendly bite, I luxuriated—but only for a couple of days, and they were far from wasted, as I drank in lots of information from my host.

The second day we started out to visit the neighbors. I wanted to walk, but that was out of the question so I had my second experience as a horseman. I was devoutly thankful that my little mare was lazy—nor did I mind it that she always managed to step on my toes just as I prepared to mount. But she did take advantage of me when she chose to stop on a log bridge not more than two feet wide and standing on three legs try to bite a fly that she pretended was on the fourth. We did not fall off but had I started her with voice or whip I think we should have. She had a habit too of imagining she saw a snake ahead in the trail and suddenly leaping to one side. I staid with her every time and am still just as much surprised at it as she was.

"IXTAL."

OUR first visit was to "Ixtal," where I had a chance to again thank Mr. Adams for his earlier helpfulness, and also to meet his right hand man, Mr. Stewart. It was to my mind, the hottest day we had experienced when we finally reached the ridge upon which the plantation buildings were located. By that time I was getting to be somewhat of a *connoisseur* in rubber trees, and so, after the noon breakfast, was

"LA FLORENCIA." COFFEE AMONG RUBBER TREES THREE TO FIVE YEARS OLD.

glad to accompany Mr. Adams on a tour of inspection. Here were some 250 acres planted to rubber, the oldest being four years, the total number of trees being about 150,000.

The land was very similar to that at "La Ventura" and the growth about the same, although in a part of the plantation the trees seemed to be a little taller. *Latex* flowed from them all abundantly and my guide said that he had never found one that did not show plenty of milk. In discussing this question Mr. Adams told of an Austrian scientist who had been in that region and who claimed that there were three native *Castilloa* species, only one of which was a rubber producer. They all looked alike, so he said, and the difference in them could only be detected by a careful examination of the cellular structure of the leaf. He said further that he uprooted 80 per cent. of his own first year's planting because he did not know this. When he finally did get the right tree big enough to tap it bled so freely that he was obliged to stop the cuts with clay else it would have bled to death. We were able to assure Mr. Adams that this was not credible, to which he agreed.

One of the officials of "Ixtal," Dr. Butcher, has a very pretty home not far from the plantation headquarters, at which we called on our way back. The Doctor and his wife received us hospitably, and while the others chatted on neighborhood topics the head of the house took me out and showed me the skin of a big snake that he had just killed. Now one of the common dreads that the tenderfoot carries with him into the tropics is that of snakes. It would be folly to believe that there is no danger from them, when one considers the impenetrable jungles and the conditions that nature has prepared for an ideal reptilean existence. As a matter of fact, however, during the whole of my trip I did not see a single live snake, big or little. I did see the skins of some very sizeable snakes nailed to walls of the planters' houses, such as that which Dr. Butcher showed me, but even they are rare. The planters say that this lack of snakes is due to the fact that the woods are full of wild hogs who consider any kind, poisonous or otherwise, a great delicacy, and that those that escape the hogs are very likely to be caught by the hawks, which are very abundant and always on the watch. There are only two really poisonous snakes there, as far as known; one is the *rabade keuso*, which is small, quick and very deadly, and seems to have a special antipathy to mules. The second is called by the natives the "sorda," and is something like the diamond rattlesnake but has no rattles. It has poison fangs an inch and a half long, is very slow to move, and quite poisonous. There are also small pythons and some big black racers, both harmless.

WE returned to "La Ventura" late in the afternoon, and after a good night's sleep, were fully prepared for further visiting. Our next journey was to "La Junta," the largest plantation in that district. Like all the others, the approach was through the forest, by the usual trail that meant considerable rough riding, the fording of streams, plodding through mud, and climbing over fallen tree trunks. By this time I was fairly used to it however, and was enjoying it as I never would have believed possible. It was early in the afternoon when we emerged from the forest, and struck the broad fine road that runs through the plantation. We were now on a ridge that gave a fine view, not only of the rolling land covered with young rubber trees, but some two miles off we also saw the Administration building and workmen's homes that mark the center of the planting operations. The estate contains some 5000 acres, of which one half is already cleared, most of it planted to rubber. The trees are from 7 to 9 feet apart, and looked as if they were in prime condition. The orchard numbers about 750,000 rubber trees. The oldest of these will be two years old next July, and average 2.5 inches in diameter, a foot from the ground, and about 7 feet in height. For help there are from 200 to 400 men, one half of whom are natives. Perhaps here more than anywhere else has been tried the experiment of importing labor, and not depending entirely upon the native, who is not at all times entirely reliable.

"LA JUNTA."

THE average *mozo*, or agricultural laborer, is however a most interesting study. If treated well he is a good workman, and that too without any particular reason why he should be. In the community in which he lives he has allotted to him a certain amount of land, which if tilled three months in the year very moderately will produce enough to keep its owner in what is to him comfort, the year round. As a rule, the *mozo* is of medium height, strong and

THE "MOZO."

"LA FLORENCIA." PLANTATION HOUSE.

"LA FLORENCIA." FINE STAND OF RUBBER TWO TO FOUR YEARS OLD.

skilful within certain narrow limits, but ignorant, superstitious, and childlike. For instance, he can carry on his back almost as much as an able bodied burro, but if he were to reach with both hands up the branch of a tree over his head, he would find it almost impossible to pull his chin up even with it. On the other hand, he can use his *machete*, his constant companion, in the most skilful manner, and tirelessly. For example, he knows so thoroughly the texture and density of all tropical vegetation, that he can cut his way through the forest with scarcely a sound, grading each blow so as to exactly sever vine, stalk, or limb, without waste of strength; or if given a stint of work in clearing weeds, or undergrowth with the *machete*, can do more in half a day than any other laborer can in a day. The axe men among them are not as common as the *machete* men, but they too are exceeding skilful, wielding the straight handled, broad bladed axe with marvelous ease, and felling a tree, no matter how large it is, exactly where they wish.

As a rule the natives are not well nourished, and seem to have more sickness than do the foreign residents. Indeed, the stories of yellow fever that come to us relate more to the native workman than to any other people. Strange as it may seem also the workmen from the hill country when they get down in the hot countries are very apt to die of pneumonia. The *mozo* with-al is an unpractical sort of a chap, and while he knows it, he doesn't seem to care to change. I heard a planter point out to one of them that if he stayed on his own allotment, and worked, he would in three months raise $15 worth of corn; on the other hand if he worked that three months for the planter, he would get $60 and all the corn he wanted. The native acknowledged the force of the argument, but didn't see his way clear to change his habits. They are a very serious people, as a rule, except when full of *aguardiente;* then they become rather boastful, and are sometimes quarrelsome.

A pretty custom of the country is the greeting that they always give the traveler, and usually each other when they meet. In the morning it is "*buenos dias*," and in the afternoon "*buenos tarde*," and in the evening, "*buenos noches*."

The *mozo* is essentially a religious being, and his impulses find ample scope in the thirty-five *fiestas*, or feast days, that have been provided for him. He usually patronizes at least two of these, and oftentimes many more, and spends every cent he has on *aguardiente* and *mescal*. The result is he gets conspicuously drunk and stays so as long as he can. Such a thing as a *mozo* having money ahead is unknown. On the contrary he is usually in debt. The planters therefore, when they hire them, purchase this debt, which sometimes runs as high as $200, and also promise the man a certain advance to be spent at the next *fiesta*. The average wage is from 62½ cents a day up to about 75 cents a day, and found. This as a rule includes three drinks of *aguardiente* a day. Some of the planters have secured negroes direct from the United States and from Jamaica. These get about 75 cents a day, and found, except when railroad contractors tempt them off by offering them from $2 to $5 a day. But to return to "La Junta."

A PLANTATION VILLAGE.

WE rode for a long distance through the rubber, and finally, ascending a steep hill, found ourselves in the main street of the plantation village. Here was concentrated the life of the place, and the scene certainly was a busy one. Of the thirty or more native houses of bamboo and palm thatched, several were rapidly being turned into frame dwellings with tiled roofs, and built to stay. Beyond these was the long one story dwelling house of the general manager and his baker's dozen of active young American assistants. Then came the store, stocked with as large a variety of goods as any village emporium could boast, and then a two story building, the lower part of which was the general dining hall, and the upper the office of general manager and field superintendent. On the opposite side of the street was the carpenter's and blacksmith's shop, the stables, etc.

The active head of affairs, Mr. George Mann, caught sight of us almost as soon as we arrived, and not only bade us to supper, but insisted that we stay over night. This we decided to do, rather than to ride the trail after nightfall. He then introduced us to his staff, or such of them as were not absent, and Messrs. Kramer, Hill, Zimmerman, Shufeldt, Sleister, and Dr. Erwin, all young, active, and friendly, who, together with their capable chief, will long linger in my memory as types of Americans that are so effectually conquering the tropical wilderness. Dr. Erwin, by the way, is physician and surgeon for the plantation, and Mr. Shufeldt is the son of Commodore Shufeldt of the United States navy, who surveyed the route for the Tehuantepec ship canal for the United States government some years ago. Mr. Sleister I had already met, as he was on the train that bore me to Achotal. I did not see much of him, however, as he had a carload of Tennessee negroes in charge to deliver to "La Junta;" and as one or two of them were "bad coons," and as liquor was abundant at every stopping place, his hands were full most of the time. By the exercise of much patience and tact, and by wearing a huge Mauser revolver while in their company, he finally got them all safely there.

There was still enough of daylight to have a look around, so we visited the various shops, together with the sawmill, brickyard, and waterworks, inspected the native quarters, and got back just as supper was announced. We spent the evening in the assembly room of the officers, smoking big black Mexican cigars that have no harmful effect in that climate, but would be

"LA FLORENCIA." LARGE CULTIVATED RUBBER.

deadly in the north, and listening to home music from a well equipped phonograph.

WE retired about 11, and had hardly got a good grip on our beauty sleep when a stir outside showed that something was doing. Not to miss anything, I went out upon the broad veranda, and found the young men saddling their horses, and equipping themselves for a moonlight ride. Seeing me expectant, they informed me that nine of the Tennessee negroes had skipped, doubtless to join some railroad gang, and for a short time get higher wages. As the company had paid their fare from the States to the plantation, and as the moral effect on the others would be bad if they were not brought back, it behooved those in charge to stop them before they reached the railroad. And they certainly went about the matter as if they meant business. It was a thrilling sight to see them assembling, and I forgot that I was pajama clad and barefooted, and stood in the moonlight watching, until they finally cantered off down through the valley and over the hills, and were lost to sight in the black wall of forest, into which the road ran. To finish this incident I may add that they overtook all of the runaways, and brought them back, and they went to work again just as if nothing had happened.

A LABOR PROBLEM.

The next morning after inspecting the rubber, and getting samples of earth for analysis, we took the road home, where we arrived safe, sound and happy, except for the *rodadors* and *pinoleos*. Of these I shall have more to say at another time.

PLANT life in Mexico seems to be exceptionally free from pests of all sorts. I did, in the course of my trip, see three caterpillar nests, but not in the *Tierra Caliente*. I looked and inquired particularly for any enemy of the *Castilloa*, but found trace of none, and heard only of an ant that attacks the tree where it has been wounded at times, but that only rarely. Of the few trees thus attacked, nearly all had thrown out woody excrescences that were not only protecting the inner tissues, but seemed actually to be crowding the devourers out. So rare is it that a tree is thus attacked that the planters take no precaution against it.

ABSENCE OF PLANT PESTS.

Speaking of ants, these busy workers are in evidence nearly everywhere, and when the "marching ants" come in force, everything that can, gets out of the way. The householders welcome these visits, as the ant army goes through every crack and cranny in the house, killing mice, spiders, and insects of all sorts; in fact, making a clean sweep. When they call in the middle of the night, and announce their arrival by mounting one's bed, and by the most vicious of bites, it is a bit sudden, but all one has to do is to get out of the way until their work is done, when they depart with the curious rustling noise with which they came. Some of these armies march great distances, and have huge nests as much as 50 feet in diameter.

The rubber tree is not singular in being free from pests—nearly all others seem to be equally so. It was a rare thing to see a leaf or a petal that had been blighted or eaten by any sort of insect. The reasons for this remarkable immunity from the usual pests are not far to seek. They will, I think, be found in the great abundance of birds, and no doubt in the wonderful equilibrium that nature has there established between the insects that are destructive to plant life, and the other insects that prey upon them. It is to be hoped that this balance may long be preserved. As a matter of caution, it might be well to state that the hunter who slaughters birds for their plumes will not find a cordial welcome among the Mexican planters.

In the dry season, which of course was when my visit was made, there are but few butterflies and moths, but in the rainy season they are most abundant. Of these my host had a collection which gave one a wonderful insight into the winged beauties of that section.

NOTE.—The illustrations accompanying these letters do not always relate to the plantations described, because photographs were not obtainable from all the places visited. In such cases views are shown of neighboring and more or less similar plantations.

"LA FLORENCIA." TAPPING LARGE WILD RUBBER TREE.

THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

By Our Regular Correspondent.

THIS headline may seem somewhat incongruous under the general title of this correspondence, but all the same I imagine that my readers will not press for an apology on the few occasions when I draw their attention to rubber works situated outside the confines of Great Britain. Probably, though I speak with some reserve, Clermont-Ferrand is the most important center, Paris excluded, of the rubber trade in France. It is here that the well known Michelin tires are made, the firm of Michelin et Cie. having from small beginnings evolved in a few years to a concern of great size and importance, mainly through the expansion of their motor tire business. The important general rubber manufacturing firm of Torrilhon et Cie. is also situated in the town, or, more accurately speaking, in the adjoining township of Royat, still, as in Roman times, much frequented as a watering place. A third firm making general rubber goods and employing a large number of hands is Bergougnan et Cie., makers of the "Gaulois" tire. Clermont-Ferrand, I may say for the benefit of those who are not deeply learned in the geography of France, is a struggling town of somewhat uninviting aspect, but beautifully situated at the base of the Puy de Dôme in the mountainous region of the Auvergne, eight hours distant from Paris and twelve from Marseilles. Coming to it, as I did, from the sunshine of the Riviera, I found the winds from the snow-capped Puy de Dôme rather trying, the region being one subject to extremes of temperature. Probably what would most forcibly impress those who are familiar with the usual environment of rubber works in London, Glasgow, or Manchester, is the fact that at Clermont-Ferrand art has not been altogether trampled under foot by the imperious demands of trade. The works of Messrs. Torrilhon, with gardens, fountains, and flowering trees, would form an agreeable picture postcard, and one which would go a long way to remove the prejudices of the most ardent Ruskinite against the spread of manufactures into erstwhile country districts. The reason why Clermont-Ferrand is such an important rubber manufacturing center appears to depend upon the ample supply of cheap labor. The town has few industries of any importance, and the inhabitants of the Auvergne have long had the reputation of being industrious, steady folk. The chief drawback of the place, I was told, is the limited water supply, this sometimes proving a serious handicap. All the works mentioned report themselves as being very busy, and as having extensions of their premises in view so that whatever may be the case in Great Britain it does not seem that the rubber trade in France has any cause for grumbling. As far as I could make out the decline in favor of the rubber proofed coat in England has not been reflected in France, one manufacturer affecting considerable surprise when being shown a rainproof coat made by a British rubber manufacturer, and which contained no rubber. In another column of this Journal mention was recently made of the Swinehart tire, of American origin. This tire, which is of the solid type for carriages, is now the sole property [in France] of Messrs. Torrilhon, and arrangements are approaching completion for making it on the large scale. The name of Torrilhon has come somewhat prominently before English readers of late in connection with the translation of the French book on the India-rubber manufacture written by Messrs. Seeligman, Lamy-Torrilhon, and Falconnet. Mr. Lamy-Torrilhon, however, I may mention, is not engaged at the Royat works, but manages the large warehouse of the firm in the Rue Faubourg des Poissoniere in Paris. Another of his literary efforts has been the translation into French of Mr. Pearson's well known book, "Crude Rubber and Compounding Ingredients." Under the able management of Mr. Murphy, an Irishman, who has gained experience in several British and Continental factories, Messrs. Torrilhon seem destined to become in the future an even greater factor in the rubber trade of France than they have been in the past. A feature of these works, by the way, is that one of the two mills owned by the firm is situated on the river, and the rubber washing machinery is driven by a water wheel. In summer time the washed rubber is to a great extent dried by exposure to the sun's rays, a procedure which is followed at some other Continental works.

NOTES FROM FRANCE.

THIS branch still remains in a very moribund condition as far as the home trade is concerned, though shippers report improved business during the last few weeks to South America, Java, etc. The hoped-for revival of the macintosh trade in Great Britain seems as far off as ever, the predicted popular disgust with the rainproof being anything but in evidence so far. The references made by Dr. Weber in a contemporary with respect to the smell of macintosh garments, and as to the means of obviating this defect, have been read with mixed feelings by those interested in one way or another. The substitute manufacturers express themselves forcibly, as is only natural, against the following paragraph: "It is important to reduce to a minimum the odoriferous ingredients, each of which naturally contributes its quota to the final effect. For this reason I consider it absolutely essential to exclude absolutely from mixings intended to yield odorless proofings either the white or the brown description of substitutes." Into the merits of the case as argued on both sides I am not disposed to enter on this occasion. Trade interests may of course easily prove a stumbling block to those who at heart have no wish to prevaricate; all the same it may turn out that the defenders of the maligned substitute have a stronger case than readers of the article in question would imagine.

THE PROOFING TRADE.

THIS article may now be considered fairly on its trial. The reports on it made to me by purchasers are not by any means unanimous in its favor, but naturally the erstwhile supremacy of the product of the sponge fisheries—to use a singularly inappropriate expression—will not be overturned in a moment. With regard to the manufacture, I am not aware that the struggles of certain British firms in this direction have yet been crowned with success. A foreign firm to whom I mentioned the matter did not appear to be familiar with the article but had no doubt they could manufacture it if they wanted to do so.

THE RUBBER SPONGE UP-TO-DATE.

EDITORIAL reference was made in the April issue of this Journal to the position taken up by the Dunlop Pneumatic Tyre Co. with regard to other motor tire manufacturers. The circular issued by the Dunlop company to explain their position requires no comment from me, but I may say that something of the sort was wanted, as undoubtedly the company have been maligned by

DUNLOP AMENITIES.

those whose knowledge of the circumstances is very superficial. Quite recently a buyer of motor tires told me that he would purchase anywhere rather than from the Dunlop they acted so unfairly to their competitors. Efforts, therefore, to counteract such opinions cannot be considered superfluous.

MARTIN TIRE.

THIS motor tire, with which Sir William Tomlinson, Bart., of Preston, is prominently connected, is now being manufactured for the company by The Dermatine Co., Limited, of London, certain points on which some little friction occurred with regard to the earlier manufacture having now been amicably adjusted.

RISE IN PRICE OF MECHANICAL RUBBER GOODS.

JUST before the date of posting comes the announcement in the form of a circular from the India-Rubber Manufacturers' Association that a 10 per cent. rise has been agreed upon in the case of packing, belting, and hose, owing to the increase in the price of raw rubber. With regard to the reception of this notice by buyers I may have something to say next month, but I cannot think that when they consider the situation they will feel that they have legitimate cause for grumbling. The feature of the announcement is the fact that such prominent firms as Warne's, the Silvertown, and the North British, who have hitherto remained outside the Association, and are not yet enrolled among its members, have yet signified their intention to follow the initiative of the Association and to abide by the decision for a 10 per cent. advance.

RED SUBSTITUTE.

I HAVE recently seen a sample of a carnation colored substitute to all appearances the ordinary flocculent white substitute dyed with some coal-tar color. The coloring matter is fast to water but bleeds freely in naphtha. The makers are Messrs G. W. Laughton & Co., of Bradford, Manchester, and the idea is to enable a manufacturer to produce a red rubber of a superior color and at a cheaper rate than by the old fashioned use of mineral coloring matters.

MESSRS. PIRELLI & CO.

QUITE recently this important Italian firm, referred to in my last notes, has opened a branch establishment in Villanueva y Geltru, 25 miles from Barcelona, Spain. The works are for the manufacture of electric cables only, and the general rubber manufacturing business is not to be taken up for the present at all events. The site of the works covers 3½ acres, employment being given at the present time to 200 men. The 300 HP. utilized is generated by two condensing steam engines, transformed into three-phase current by alternators and thus distributed to the motors driving the machinery in the different points of the works. So far Spain has not possessed any electric cable factory and the rubber manufacture proper is represented only by a small concern in Barcelona. It may be mentioned, by way of reference to what is now ancient history, that the cables from Spain to the Balearic isles, as well as many of those from Spain to Morocco, were laid by Messrs. Pirelli, the contracts being obtained in competition with the old established English firms. Members of the Institution of Electrical Engineers who joined the recent trip to north Italy express themselves as highly gratified with the hospitality extended to them by the firm, though those with whom I have conversed are somewhat in error in imagining that Italian merchants generally possess that knowledge of the English tongue which enables the Messrs. Pirelli to put the untutored Englishman at his ease. One hears so much about the progress which Italy has made of late in electric traction and lighting that it will not be without interest to say a word as to cost. Milan is splendidly lighted by electricity, but not at a particularly cheap rate; I have not got the actual figures by me, but the cost of the light per unit is much more than is the general case in our large towns. The high cost of coal for gas making has of course been a great stimulus to the electric lighting of Italy, and I suppose that as long as the electric light is cheaper than gas there is no great disposition to supply it at cut prices. In England the competition between the two sources of light must continue to exist to the advantage of the consumer.

BRITISH NORTH BORNEO.

CONSIDERING the very limited area of the tropics from which supplies of Gutta-percha can be drawn, I anticipate a successful future for the chartered company recently formed in America to work certain lands in British North Borneo for Gutta-percha and rubber. It is to be hoped that now in this area at least a stop will be put to the wasteful methods which have hitherto been practised by the natives in obtaining the Gutta-percha milk for sale to the Chinese merchants. And not only is there wanton waste by the collector, but there is also a good deal of fraudulent blending done during the coagulation of the "su-su," as the milk is called. It has long been recognized both by government officials and by those engaged in the exploitation of gutta that strong remedial measures were necessitated in the interests of the trade, but as a prominent official told me a year or two ago, the difficulties in the way of reform have proved too difficult to surmount. They had, he said, posted up stringent notices as to what was and what was not permissible, but it was not possible to engage a sufficient number of police to follow the collectors into the recesses of the jungle in order to see that the edicts were obeyed. In spite of the undoubted developments and possibilities of the Marconi system of telegraphy, there does not as yet seem any decline in the demand for Gutta-percha for this purpose, and anything which tends to the conservation of its sources of supply is matter therefore for congratulation.

RUBBER FROM THE SOUDAN.

FROM what I hear from a merchant doing business at Khartoum, the export of rubber via Egypt is likely to show a considerable augmentation in the near future. The quality of the rubber is very good, a recent lot having made 3 shillings 6 pence per pound. At first loss was occasioned by inexperience, the merchants not being able to distinguish between sound rubber and a more or less worthless resinous product offered them under the name of rubber. "Now we understand the business," said a merchant recently; it is to be hoped that he is not over confident for the raw rubber business contains many pitfalls even for those who have had a long and varied experience in this branch.

SOME WANTS OF THE RUBBER TRADE.

[286] FROM England: "Some friends of ours, to whom we supply a very large quantity of solid cab tire, desire us to put them in communication with American makers of electric wire welding machines. Can you give us some help?"

[287] From a rubber jobbing house: "We should like a list of the different parties in the United States who manufacture solid and inflated rubber balls, of every description."

[288] "Can you give us any information as to whether there is a rubber hose made which would not be affected by gasoline? Many automobilists desire to use a rubber hose attached to the nozzle of air pump for filling their automobile reservoirs, but we learn that gasoline passing through the hose will in time decompose the material."

[289] From a New York house: "We should like the names of buyers of second hand tires to sell again, not reclaimers."

[290] A hard rubber factory desires to know who has battery jar scrap for sale, and at what price.

INDIA-RUBBER INTERESTS IN EUROPE.

THE FIRST BELGIAN RUBBER MANUFACTURER.

THE honor of creating the rubber industry in Belgium is due, without question, to Mr. J. Coenen, Sr., of Brussels, who in 1848 established in Louvain the Siegeriest factory, and, in 1850, in Brussels, that of Gustave Luyck, managed later by Mr. Eugène Pavoux. In 1873 Mr. Coenen founded in Cureghem a plant for the manufacturing of hose made of rubber treated hemp for fire engines, and in 1882 added a department for the manufacture of waterproof garments. It was in 1892 when the firm of Coenen invented a pneumatic tire for bicycles, which by a special process was made unpuncturable. This pneumatic tire, in the manufacturing of which entered pure Pará rubber and a linen-cloth called "Calixor," with diagonally woven threads, soon acquired a justified fame. We may state also that towards 1848 Mr. Coenen discovered, simultaneously with Goodyear in America, the process of vulcanizing of India-rubber by means of steam. Mr. Coenen bears his seventy one years lightly, and is still very actively engaged in the management of his factory—J. Coenen perè et Cie.—*Le Moniteur du Caoutchouc.*

THE RUBBER INDUSTRY IN ITALY.

A HANDSOMELY got up pamphlet entitled "Notes on the Industry and Works of Pirelli & Co., Limited (Milan, Italy)," containing illustrations of the company's factories, was issued in honor of the visit to Milan of the Institute of Electrical Engineers of Great Britain, in April last. In addition to the Milan works, founded in 1872 and now giving employment to an average of 2700 workmen, in the manufacture of every article that can be made in India-rubber, Gutta-percha, and asbestos, the company have also cable works at Spezia, Italy, at which have been filled a number of important orders for submarine telegraph cables for the governments of Italy and Spain, in addition to much private work. For instance, mention is made of a cable to be laid in the Nile for the tramway company at Cairo, Egypt. Rubber insulated cables for torpedo work were supplied lately to the royal navy of Greece. In 1901 was founded the Spanish company, Pirelli y Cia., for the establishment of an insulated wire plant near the city of Barcelona, where already 200 workmen are employed, in buildings covering 3½ acres. The total capital employed by Pirelli & Co. amounts to 5,500,000 *lire* in shares and 3,000,000 in debentures, or a total of $1,640,500, and the company now ranks as one of the four or five largest rubber concerns in the world.

A PATENT SUIT WON BY THE DUNLOP COMPANY.

THE New Lamb Tyre Co. (Glasgow) were sued November 4, 1901, in the court of session of Scotland, by the Dunlop Pneumatic Tyre Co., Limited, who alleged infringement of the patent on tires issued to C. K. Welch (No. 14,563 of 1890) and owned by the plaintiff. The defense was that the tires complained of were made under a patent (No. 23,852 of 1897) granted to George Lamb, and that there had been no infringement of the Welch patent. In April, 1902, a decision was rendered in favor of the Dunlop company, from which there was an appeal, with the result that the decision has been affirmed. The court said that the validity of the Welch patent had been sufficiently upheld by the courts; the court would not consider the question of the later patent granted to Lamb, as the cycle tires or covers complained of had not been made in accordance with that patent. The edges of the Lamb tire covers were made with a number of loose strands of yarn solutioned so as to form part of the cover itself, which strands formed a taping to strengthen the edge of the canvas. The defense denied that the effect of such strands was to hold the tire cover in position, but that the cover was held by frictional or other forces. The court, however, decided that the efficient cause of the tire being kept in place was the inextensibility of the edges produced by the hempen strands, which constituted an infringement of the principle of the Welch patent, under which this service is performed by the inextensibility of the wires in the edge of the tire covers. The Welch patent, by the way, expires on September 16, 1904.

COMPANY CHANGE AT GLASGOW, SCOTLAND.

THE Craigpark Electric Cable Co., Limited (Glasgow), has been formed, with £150,000 capital, authorized, to take over the business of the The Craigpark Co., Limited, manufacturers since 1897 of electric and telegraph wires and cables and India-rubber and Gutta-percha goods. The Craigpark Co. have done a profitable business from the beginning, the dividends on the ordinary shares for five years having been 4 per cent., 8 per cent., 10 per cent., 12½ per cent., 12½ per cent. The business is transferred to the new company for £37,500, cash, including £4239 for good will. Directors: J. T. Tullis (chairman), W. S. Brown, W. R. Dick, Claud Hamilton, Andrew B. Maclean (managing director). John Deas is secretary. Lord Kelvin is consulting engineer. Offices: Flemington street, Springburn, Glasgow.

A GERMAN RUBBER SPONGE.

THE specification of a British patent granted to the Vereinigte Gummiwaaren-Fabriken, Harburg-Wien, for the manufacture of a rubber sponge, states: "Unvulcanized India-rubber is mixed with natural seeds, or with molded bodies of flour, clay, gelatine, sugar compositions, or other substances, or with non volatile soluable metallic salts, either by rolling, or by first dissolving the India-rubber in a hydrocarbon. The mixture is vulcanized, and the added bodies are subsequently washed out with water, acids, or alkalies."

THE RUBBER FACTORIES AT HARBURG.

THE explanation of the existence of the large rubber factories at Harburg a/d Elbe, in Prussia, instead of their being in Hamburg, the great commercial metropolis, is to be found in the fact that until 1888 the latter city remained outside of the German *Zollverein* (customs union). Under the old régime, articles manufactured in the free town of Hamburg would have been subject to an import duty on entering any other part of Germany, and hence the rubber industries owned in Hamburg became chiefly located within the limits of the customs union, including Harburg, across the river from Hamburg.

WHERE BRITISH RUBBER MACHINERY IS MADE.

A VERY full account appears, in a recent issue of the Edinburgh *Evening Dispatch*, of the extensive establishment of Messrs. Bertrams, Limited, owners of St. Katherine Works, Sciennes, Edinburgh, manufacturers of machinery. The present business was established in 1821 by William and George Bertram, respectively uncle and father of the present acting director, David Bertram. This firm were the pioneer builders of machines for the production of paper on the "Fourdriner" system, and have equipped machines for paper mills in Great Britain, continental Europe, India, China, Japan, and Australia, including some of the largest installations in existence

Their production has not been confined to paper making machinery, by any means. They have lately designed the whole of a large new linoleum establishment at Liff, near Dundee, Scotland, and a floorcloth factory at Fife, and they are doing an important business in supplying plant for India-rubber and Gutta-percha works. The Edinburgh newspaper mentions that "a very interesting order was recently carried out for a large factory near Liverpool on American lines," for reclaiming rubber.

THE LIVERPOOL ELECTRIC CABLE CO., LIMITED.

THIS new enterprise is an outgrowth of the Liverpool Rubber Co., Limited, with the same proprietors as the old company, though separately incorporated for purposes of convenience. The premises occupied, 292, Vauxhall road, Liverpool, are those vacated when the shoe manufacture was removed to the new factory of the Liverpool Rubber Co., at Walton. The old factory, in Vauxhall road, now comprises the rubber thread department, mechanical rubber goods, and electric wires and cables. THE INDIA RUBBER WORLD'S British correspondent lately referred to the products of the new company as having already attracted favorable attention in the trade on account of the superior appearance of their finish.

RUBBER GOODS HIGHER IN AUSTRIA-HUNGARY.

AN increase of 10 per cent. in the price of rubber goods went into effect in Austria-Hungary on April 20, as the result of a conference held by the leading manufacturers. The reason given is the same that has led to concerted price advances in Germany and Great Britain—a higher range of cost of raw materials than prevailed when the rubber goods prices lately current were adopted. The advance relates to nearly all soft rubber goods; special prices were fixed for some technical goods and erasing rubber. At the same meeting, says the *Gummi-Zeitung*, rules were adopted regulating tenders for supplying rubber goods required by the state railways—a matter not so well defined hitherto as in Germany.

GREAT BRITAIN.

THE property and assets, including patents, of the New Grappler Tyre Co., Limited (Dublin), now in liquidation, have lately been offered for sale. The company at one time did a good business in cycle tires and later, after a reorganization, seemed likely to succeed with motor tires, but they were at a disadvantage from the want of working capital.

=The Forth Rubber Co., Limited (Edinburgh), waterproofers and mechanical rubber and golf ball manufacturers, have decided to go into liquidation.

=Mr. James Crump, for 37 years connected with what is now P. B. Cow & Co., India-rubber manufacturers, London, and since 1887 a member of the firm, has retired from business on account of failing eyesight. He was the head of the counting house, at Cheapside, and on his retirement was presented with a handsome testimonial by the staff.

=The business of The Ixion Tyre and Rubber Co., Limited (London), which went into voluntary liquidation in October, 1902, and will now pay their creditors in full, has been purchased by W. Edmunds, who will carry on the business as a private concern, as The Ixion Rubber Co.

=The India Rubber, Gutta Percha and Telegraph Works Co., Limited (London) have in their pay 4200 employés, and the number (as was stated at the late meeting of the company is ever growing.

=The W. T. Henley's Telegraph Works Co., Limited, have been awarded a contract for cables for the electric lighting of Sydney, New South Wales, reported to amount in value to £40,000.

=One of the best known directors of the Liverpool Rubber Co., Limited, Mr. George Jäger, the well known sugar refiner, was reported in a recent letter to THE INDIA RUBBER WORLD as being very dangerously ill.

GERMANY.

ON April 1 a change occurred in the constitution of the firm of Ekert Brothers, for a dozen years or more importers of American rubber shoes in Hamburg. L. Ekert retired, and the business will be continued by the remaining partner, Maximilian Ekert, together with Joseph Ekert, who now enters the firm.

=At the general meeting of the Asbest- und Gummiwerke Alfred Calmon, Aktiengesellschaft (Hamburg), the dividend for the last business year was fixed at 6 per cent. It is stated that the business for the first two months of the present business year showed an increase of 20 per cent. over the same period of last year, and conditions are generally satisfactory.

=Gustav Bucheisen is now the proprietor of the Deutsche Gummi- und Telegraphenwerke (Berlin-Halensee), and the name of the firm has been changed to Bucheisen & Co.

=The steamship *Stephan*, launched lately at the Vulcan shipyards, at Stettin, for the Norddeutsche Seekabelwerke, A.-G., at Nordenham, is the first vessel built in Germany expressly for cable laying. It has a capacity for carrying 5000 tons of deep sea cable, and will be used this year to lay the new transatlantic cable now building at Nordenham.

=The Continental Caoutchouc- und Guttapercha-Compagnie (Hanover), it is reported, manufacture about 600,000 pneumatic cycle tires annually, and 10,000 inner tubes can be produced daily. Their motor tire department also has reached large dimensions. "Continental" motor tires are now sold in Great Britain under an arrangement with the Clipper Pneumatic Tyre Co., Limited, and it is anticipated that, with the expiration of the Dunlop tire patents, their cycle tires will also be offered in the British market.

=Under the firm name Schuh-, Leder- und Gummi- Co., Weimar, G. m. b. H., the three brothers, Eduard, Karl, and Ferdinand Laux have engaged in the wholesaling of shoe, leather, and rubber goods at Weimar, Germany, with a capital of 150,000 marks.

BELGIUM.

THE fourth business report of the Société Anonyme pour le Commerce et l'Industrie du Caoutchouc (Brussels) shows earnings for 1902 of 365,879 francs [=$70,615], against 208,041 francs for the preceding year. After writing off for all purposes, a dividend of 6½ per cent. was declared on the preferred capital of 1,000,000 francs [=$193,000] and 2.25 francs each for the 10,000 ordinary shares—a total disbursement of 87,500 francs [=$16,887.50]. A good business in rubber cut sheet is mentioned especially, the sales in this branch having amounted to 509 251 francs.

FRANCE.

GUSTAVE JOB & CIE. (Paris) have been made exclusive agents in France for the sale of the reclaimed rubber products of the North Western Rubber Co., Limited (Liverpool).

A DECREE which takes effect in Ecuador on April 1, 1903, provides for the payment of a premium by the government of 20 cents [=9.7 cents, gold] for each rubber tree planted, for not less than 500 trees on one plantation, one year old. Natives engaged in rubber cultivation are to be exempt from military service in time of peace. The government has authorized the suspension of rubber gathering in the forests of the western slope of the country for ten years.

ANNUAL MEETING OF THE NEW ENGLAND RUBBER CLUB.

THE regular Spring dinner of the New England Rubber Club and the third annual meeting occurred on the evening of May 15, at the Exchange Club, Boston. The occasion was called for the sake of euphony a "Mexican-American Fiesta," on account of introduction of features relating to Mexico, in connection with the development there of the rubber planting interest. Prior to the dinner there was an informal social session of half an hour, followed by a brief business meeting, at which, ex-Governor Bourn being in the chair, the reports for the past year were presented and accepted. They are as follows:

SECRETARY'S REPORT.

MR. PRESIDENT AND MEMBERS OF THE NEW ENGLAND RUBBER CLUB: The last general meeting of the New England Rubber Club was held at the Exchange Club, Boston, on the evening of May 13, 1902, the president, Augustus O. Bourn, presiding. The reports of the secretary, treasurer, and auditors were read and accepted. A brief amendment to the constitution was proposed, whereby one honorary president and four honorary vice presidents were elected, the offices being filled as follows:

Honorary President—ELISHA S. CONVERSE
Honorary Vice Presidents—GEORGE A. ALDEN, JAMES BENNETT FORSYTH, GEORGE H. HOOD, ROBERT D. EVANS.

The following officers were then elected:

President—AUGUSTUS O. BOURN.
Vice President—LEWIS D. APSLEY.
Treasurer—GEORGE P. WHITMORE
Secretary—HENRY C. PEARSON.
Assistant Secretary—WM H. GLEASON.
Directors—COSTELLO C. CONVERSE, JOSEPH DAVOL, ALLEN L. COMSTOCK, WALTER S. BALLOU, JOHN H. FLINT, GEORGE H. FORSYTH.

Adjourned.

A review of the past year of our Club's life shows marked progress. At our last annual meeting the total membership of the Club was 149. It is now 175. We have had during the year five resignations, due to the fact that those resigning had been called to other fields of usefulness, where it would be impossible for them to attend our meetings, and thus could derive no benefit from the Club.

The three regular meetings of the Club during the past year—the Midsummer Outing at the Country Club, and the Spring and Thanksgiving Dinners—were all well attended, and were most enjoyable occasions. The committees on dinners, entertainments, and sports have all had their work well in hand, and everything has moved smoothly and without friction.

As far as we know the members of the Club have all been prosperous and happy, and the Club as a whole might do well to take note of this fact. This organization, being a purely social one, we ought to rejoice over the good fortune of the individual members, and mourn with them over their sorrows. In order to make this practical, I would suggest that we now rejoice with our fellow member, Mr. Barker, over the advent of a diminutive and masculine Barker in his household, and also that we mourn with Treasurer Whitmore over the irreparable loss of his appendix. Respectfully submitted, HENRY C. PEARSON, Secretary.

TREASURER'S REPORT.

AT THE ANNUAL MEETING OF MEMBERS; ADJOURNED FROM APRIL 20, 1903, TO MAY 15, 1903.

RECEIPTS.

Bank balance April 21, 1902		$ 912.57
From members for initiation	$ 115 00	
From members for dues	1,095.12	
From members for dinners	940.62	2,150.74
Total		$3,063 31

DISBURSEMENTS.

Members for overpaid dues	$ 2.50	
Dinners, etc.	1,220.97	
Flowers	50.00	
Music and entertainment	190.00	
Cigars	74.67	
Prizes and sporting goods	31.00	
Printing, postage, etc	169 61	$1,738.75
Bank balance and cash on hand April 20, 1903		1,324 56
Total		$3,063.31

Respectfully submitted. GEORGE P. WHITMORE, Treasurer.

AUDITORS' REPORT.

TO THE MEMBERS OF THE NEW ENGLAND RUBBER CLUB, Boston, Mass.: We hereby certify that we have audited the accounts of the Treasurer for the year ending April 20, 1903, and that same appear to be correct. We further certify that the attached statement of receipts and disbursements for the year also appears to us correct.

J. F. DUNBAR, GEORGE P. EUSTIS, } Auditors.

A most interesting feature of the dinner was the manufacture, in the presence of the audience, by Mr. W. F. Mayo, of a Mexican milk punch. Mr. Mayo had provided himself with a glass pitcher full of milk and a bottle of alcohol which he combined in a huge punch bowl, all the time talking interestingly about typical Mexican drinks, and when the pouring was finished produced not a beverage but a mass of pure rubber, and then it was that the audience suddenly appreciated that the milk was rubber milk and that they had been very cleverly fooled.

ANNUAL ELECTION.

THE following officers were then elected:

President—LEWIS D. APSLEY.
Vice President—ARTHUR W. STEDMAN.
Treasurer—GEORGE P. WHITMORE.
Secretary—HENRY C. PEARSON.
Assistant Secretary—E. E. WADBROOK.
Directors—COSTELLO C. CONVERSE, JOSEPH DAVOL, ALLEN L. COMSTOCK, A. M PAUL, JOHN H. FLINT, GEORGE H. FORSYTH.

On motion of the secretary, Messrs Henry C. Morse and Augustus O. Bourn, former presidents of the Club, were made honorary members. The meeting was then adjourned and those present made their way to the banquet hall above, which was decorated with floral emblems and with the Mexican and American flags artistically entwined. After the dinner the following speakers were heard from: Señor Arthur P. Cushing, Mexican consul at Boston, who represented the Mexican ambasssador, and who spoke most interestingly on President Diaz; Lieutenant Godfrey L. Carden, U. S. N., who spoke on foreign industrial conditions, and Mr. Elbert E. Foland, who told several good after-dinner stories; the Hon. William M. Owen, who was present as the guest of Mr. Arthur W. Stedman, and was requisitioned by Toastmaster Apsley to tell what he knew about the isthmus of Tehuantepec, and the Editor of THE INDIA RUBBER WORLD, who was requested to explain why he had gone to Mexico lately, and what he saw there. These speeches were interspersed by music, notably the Mexican national hymn, sung by Mr. Harry Noyes.

Lieutenant Carden had spent several months in Europe, in the interest of the coming St. Louis exposition, and his remarks were most interesting in regard to what may be learned by Americans at St. Louis from the foreign exhibits already assured. Many of these will be of a notable character, and while they will relate mostly to other industries than rubber, the rubber trade would do well to keep advised with regard to mechanical development.

"CIVILISATION IN CONGOLAND."*

THIS is not, like some other recent books, a record of personal observations, but a citation of authorities on conditions existing in the Congo Free State, made by the secretary of the Aborigines Protection Society, a philanthropic organization which has existed in England for three quarters of a century. The author writes, however, in a personal capacity, and not as representing the society with which he is officially connected. This society welcomed the decisions of the international conference of 1884 which paved the way for the Congo Free State, as an earnest of a great civilizing work, and King Leopold, now sovereign of the Free State, was made an honorary member of the society. But for some years past the chief activity of the society has been directed against the scandals and wrongs alleged to exist in the management of the Congo state, in which the will of the sovereign, without legislative or constitutional restraint, is law. Protests and appeals have been made to the Belgian government and likewise to other governments—to the latter because of their implied responsibility, as signers of the treaty of 1884, out of which the Free State grew.

The United States, by the way, though not signing the treaty, exerted an important influence in giving the Free State a start, being the first great power to recognize its independence, after having previously aided in checking a movement to make Portugal, and not Belgium, the trustee of the great African domain. Henry M. Stanley, who discovered the Congo river and planned largely the initial exploitation of that region, was an American, and General Sanford, a former United States minister to Brussels, held the first trading concession in the Free State and was an adviser of the sovereign. For these and other reasons American public sentiment became such as to give great moral support to what the king of the Belgians has always been pleased to term his service to the cause of progress and humanity, albeit his servants might sometimes prove recreant to their trusts and connive at cruelty to the natives gathering rubber and ivory under their guidance.

The author of this book, quoting from a mass of established testimony regarding unsavory conditions on the Congo, is not disposed to fix the blame alone upon the sovereign, but, as indicated on his title page, treats the case as one of "international wrongdoing," on the ground that since the abuses which have been perpetrated on the Congo absolve the treaty powers from further adherence to the compact of 1884, theirs is the responsibility if this crime against civilization is to continue. In the name of humanity the world is called upon to protest against a system under which ignorant black men who have been robbed of their lands are forced at the mouth of rifles to pay heavy taxes from which they derive no benefit, and to gather rubber for private companies who pay their own price for it, while competing buyers are excluded from the country. Yet the Congo Free State was formed on the assurance that absolute free trade should exist throughout its limits.

* * *

THE Congo state is interested in the collection of rubber—the principal source of wealth in that region—in two ways: (1) through its participation in the profits of the great concessionary companies at work in the *Domaine privé*, who monopolize the richest rubber supplies; and (2) through the collection of tribute from the natives "in kind," which is paid chiefly in rubber. Taking leave here of Mr. Fox Bourne's book, we turn to a recent issue of *Le Mouvement Geographique* (Brussels), containing an analysis of the Congo Free State budget for 1903. The revenue for the year is estimated as follows:

Tribute from the natives..... *francs*	16,440,000
Customs, dues, licenses, etc....	11,650,000
Total.....	28,090,000

If we consider now what the natives get in return for their forced contribution of more than half the revenues of the state, the following details from this year's estimate are available:

Force publique [20,000 or more natives hired and armed to compel the others to work]..... *francs*	7,701,765
Exploitation of the *Domaine privé* [for the sole benefit of the so called state]....	6,041,790
Administration in Africa.....	3,780,735
Administration in Europe....	491,100
Marine service.....	2,023,376
Interest on bonds, guarantees on capital, etc.....	1,656,228
Agriculture [nature not explained].....	1,373,932
Foreign affairs and justice.....	1,116,200
Public works.....	1,081,885
All other items.....	2,633,545
Total estimated disbursements.....	27,900,556

Nowhere is there any evidence of expenditures for the bettering of the condition of the native population or for the permanent improvement of the country, save for better facilities for exporting rubber, the supply of which is diminishing every year. *Le Mouvement Geographique*, however, comments on the budget as follows:

The product of the *Domaine privé*, tributes and taxes paid "in kind" by the natives, figures in the budget, of which it is the principal article, at 16,440,000 francs, being an increase of about 1,000,000. Of course, raw products are meant here. We have therefore not as yet arrived at 17,000,000 francs, and the singular decree of June 25, 1902, will not yet show its effects this year. Let us recall that this decree provides that for the purpose of "letting the missionaries and commercial people established on the Congo participate in the prosperity of the State domains - - - the direct and personal taxes shall be reduced by one fifth from the moment the product of the *Domaine privé* of the State, the tributes and taxes paid 'in kind' by the natives, will permit of stating in the budget a receipt of 17,000,000 francs." The progression of this item of the budget being given, it can be hoped that from 1904 this reduction will be granted, and that the Independent State of the Congo will offer the rare spectacle of reducing its taxes.

* * *

THE Rev. William M. Morrison, of the American Presbyterian mission on the Congo, after six years of work in that region, arrived at New York on May 16. He intends laying before the government at Washington the question of a protest against conditions in the Congo Free State. Mr. Morrison spoke at a public meeting in London, on May 5, attended by many persons of prominence, giving the results of his experiences in the Congo rubber district, as a result of which the subject has been taken up by the British parliament. On the evening of May 20 the house of commons adopted a resolution that "the government of the Congo state having at its inception guaranteed to the powers that the natives should be governed humanely and that no trading monopoly or privilege should be permitted, the House requests the government [of Great Britain] to confer with the other signatories of the Berlin general act, in virtue of which the Congo state exists, in order that measures may be adopted to abate the prevalent evils."

In its original form the above resolution recited that the Congo state had violated its obligations under the Berlin treaty, but the British government refused to accept the resolution in that form because it condemned a friendly government without direct evidence. The resolution having been adopted as amended, Great Britain will communicate forthwith with the signatories of the Berlin act, with a view to securing reforms.

* Civilisation in Congoland: A Story of International Wrong-Doing. By H. R. Fox Bourne. London: P. S. King & Co. 1903 [Cloth, 8vo. Pp. xvi+311+ folding map. Price, 10 shillings 6 pence.]

NEW GOODS AND SPECIALTIES IN RUBBER.

MORRISON'S LIFE BELT.

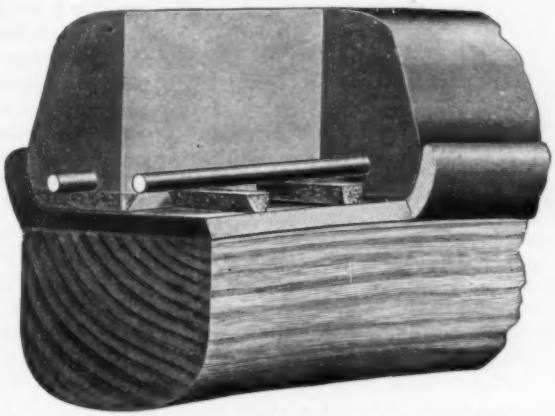
THIS is a life preserver designed for purposes of comfort and safety in water, for swimmers or others, which may be worn underneath or outside of the bathing suit and can be inflated by the mouth in a few seconds. The belt fits snugly and is adjustable by a single strap. Side straps are used, however, when the belt is worn outside the bathing suit or for a side stroke swimmer. The belt comprises two air tanks of rubber coated cloth, tested for a good air pressure, long, narrow, and flat, connected over the shoulders by heavy soft rubber air tubes and fastened on the body, between the legs, by one thin strap buckling in front. A screw valve on the end of the inflation tube (four inches long), having a large opening to allow easy and quick inflation, attached at the top of the front tank, reaches to the mouth and hangs down when not in use. This article is convenient to the traveler, as it weighs only 11 ounces, and can be rolled up to carry in the coat pocket if desired. It is especially recommended in teaching persons to swim. [Morrison Life Belt Co., Missouri Trust building, St. Louis, Missouri.]

A NEW LIFE PRESERVER.

ICILIUS W. MACCOLINI, of Long Island, New York, has obtained a United States patent [No. 721,813] for an invention, the object of which is to provide an improved life preserver, simple in construction and operation, and which may be worn underneath an ordinary body garment, or over such body garment, or without any body garment. A further object is to provide a life preserver, consisting of two similar sleeve members adapted to being inflated and connected by a transverse neck member, having a neck opening whereby the separate sleeve members are held in proper position when in use. The illustration will give an idea of the form of the article covered by the patent.

A NEW TIRE FOR HEAVY VEHICLES.

THE Milwaukee Rubber Works Co. (Milwaukee, Wisconsin) will manufacture the improved solid tire shown in the accompanying cut, which is patented. The tire is intended for heavy coach work and as the principles involved are thoroughly practical, this tire is expected to be a great success. Mr. Charles W. Harris, secretary of the company, who is the inventor, has had a number of years experience in the rubber tire business. In service it has been found that the ordinary retaining wires have a tendency to wear or cut through the base of the tire and the object of this invention is to provide means to overcome this difficulty, and thereby lengthen the life of the tire to the natural wear upon its tread. Cross wires to support the retaining wires have been employed, but such devices subject the tire to a like wear by rust and abrasion and for this reason as well as the expense and trouble of application are objectionable.



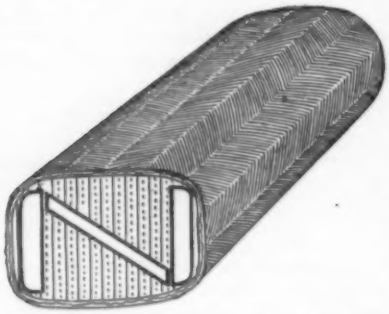
These objections are avoided by the employment of frictional fabric strips, that are flexible more in the nature of and adapted to operate with the rubber and at the same time interpose a substantial wearing surface between the retaining wires and the bottom of the channel, thereby protecting the base of the tire, and these fabric strips forming seats for the wires and resting in the channel form also a frictional bearing that materially assists in preventing the creeping of the tire.

A NOVEL RUBBER DOLL.

THE two illustrations herewith relate to a novelty in the way of a rubber doll, the distinctive feature of which is an elastic and extensible body permanently filled with air, a diaphragm dividing said body into two compartments connected by openings to permit the transfer of air from one to the other, through sound producing valves. The doll may have a hollow head with means for retaining the same in an inflated condition, and a hollow body portion connected with the head and also inflated, each of the compartments thereby formed serving to retain the other in an inflated condition, while a device between the head and body is adapted to yield a sound on the passage of air from one part to the other. This is understood to be the invention of a Presbyterian clergyman and is protected by United States patent No. 721,948, issued March 13, 1903. It has proved a popular selling article. [Baumann Rubber Co., New Haven, Connecticut.]

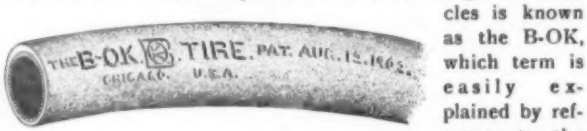
THE "MONITOR" EXPANSION PACKING.

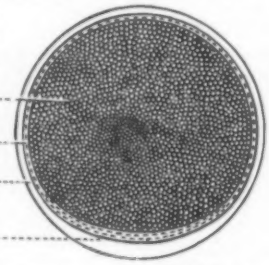
A NEW form of engine and pump packing in which there are expanding wedges of rubber, and known as the "Monitor," apparently is made on scientific principles. A cross section of the packing shows that it is composed of two triangles—wedges of the best grade of Tuck's—with rubber cushions at either end, and a rubber strip placed diagonally through the center. In use the wedges work next to the rod, the rubber cushions form gaskets, and the center strip allows the wedges to work with perfect freedom, expanding automatically, and following up with the wear on the packing. As a very slight pressure will expand the wedges, the packing lasts much longer than it otherwise would, and it is also applicable to stuffing boxes of varying sizes. [Mulconroy Co., Inc., Nos. 1213-1215 Market street, Philadelphia.]



THE "B-OK" TIRE.

A NEW tire for motor cycles, automobiles, and general vehicles is known as the B-OK, which term is easily explained by reference to the diagram showing it in cross section. The tire is really a solid one except that the interior of it is sponge rubber held in place by a duck cover lapped over the tread which gives it an extra thickness, and outside of that is a solid rubber cover. There is no doubt but what a tire of this kind will last a good while and if it punctures ever so many times it is by no means injured. A tire of this kind, of course, is a little heavier than a pneumatic of the same size, and for certain purposes it is undoubtedly safer and superior. [The B-OK Tire Co., Chicago, Illinois.]





THE JONES NON-SLIPPING RUBBER HEEL.

THERE are two features about the ordinary rubber heel that mitigate against its use in many cases. One is that, given an icy surface on which a certain amount of water rests, the heel proves as slippery as if it were made of soap. The second is the fact that, in spite of one's self, the wearer of such heels walks into an office so silently that unless he coughs, kicks over a chair, or announces himself in some unusual way, he is apt to give the owner of the premises a sudden, and sometimes unpleasant, start. A heel that is designed to do away with both of these vexations is that shown in the illustrations. The desired result is accomplished by the insertion of an oval shaped piece of leather in the middle of the heel which, under wear, roughens a little and prevents slipping, and which also gives in walking the sound that the ordinary leather heel does. A further advantage claimed for this heel is that it is strongly cemented to a thin lift of leather on the under side, by which means it is fastened securely to the shoe. [The Jones Combination Rubber Heel Co., No. 39 Vesey street, New York.]

INNER SURFACE.

HEEL SURFACE.

AN EXHIBITION OF "GALALITH."

AT the general exhibition in the interest of the hygienic milk supply, held in Hamburg from May 2 to 10, and in which much interest is taken, the exhibit of "Galalith" by the Vereinigte Gummiwaren-Fabriken, Harburg-Wien, is one of the most prominent. This new product, made from the precipitated cheese-matter of skim milk (*casein*), has been exhibited for the first time in its manifold applications. The directors of the above named firm, Herr Senator Carl Maret and Herr Louis Hoff, after the exhibition had been duly opened, explained in detail the manner of manufacture of the various articles made of Galalith. Among the many persons taking an especial interest in this product were Herr Burgomaster Dr. Burchard, Herr Burgomaster Dr. Hachmann, Herr Baron Chr. von Schroder; Senators Dr. Traun, Kähler, Dr. von Melle; State Presidents von Oertzen of Luneburg and Frhr. von Reiswitz-Kardzin-Stade, and many others. All the scientific authorities of the physical institutions evinced great interest in the product, and were unanimous in their prediction of the prominence which Galalith, on account of its many forms of application to general uses, is destined to attain. Especially admired were the marbled sheets for table purposes and wall decorations. Also an artistically worked chess set, consisting of red and black figures. Likewise the products of the Solingen industry, consisting of all sorts of cutlery; the pipe industry of Ruhla, Vienna, etc., consisting of excellent imitations of amber; the manufactures of the comb industry, and the last named article was more especially noticed on account of the beautiful color effect which can be imparted to it; it is not inflammable, like celluloid.—*Gummi Zeitung*.

THE Harburg-Vienna company are understood to have made a large investment in facilities for manufacturing the new material. Their latest yearly business report, issued to the shareholders, states: "After having partly installed the necessary machinery for the production of Galalith, we have recently entered upon its regular manufacture. We manufacture Galalith as a raw material and also partly finished, finding application in the most varied industrial branches. A positive decision, as to how this new industry will develop, can, at present, not be given, but we entertain the hope that it will prove a boon to our company."

AN importation of Ceylon rubber by the Henry A. Gould Co. (New York), being a new article of merchandise to the customs authorities, was detained for examination. On a report by a chemist connected with the service, that the rubber contained traces of sulphur, the rubber was classified as a "partially manufactured" product, and a duty imposed accordingly. On a protest being made to the general appraisers, however, this classification was overruled, and the importation admitted free, as crude rubber.

RECENT RUBBER PATENTS.

THE UNITED STATES PATENT RECORD.

ISSUED APRIL 7, 1903.

NO. 724,681. Rubber vehicle tire [solid, with metal cross stays engaging in shoulders of the rim]. George E. Dryden, Chicago, Illinois, assignor to Firestone Tire and Rubber Co.

724,693. Wheel tire [solid, wired on, with metal tread embodied in the rubber]. Robert S. Graham, assignor to one-fourth to William M. Perkins, both of New York city.

724,694. Wheel tire [solid rubber, held in place by a rod extending through it longitudinally and having its ends passed through the rim] Robert S. Graham, New York city, assignor to one-fourth to William M. Perkins, Brooklyn.

724,726. Weather-strip. Solon E. Moore, Putnam, Connecticut.

724,830. Pneumatic tire. Wilbraham Edmunds, London, England.

724,983. Fountain pen. Paul E. Wirt, Bloomsburg, Pennsylvania.

724,984. Fountain pen. Paul E. Wirt, Bloomsburg, Pennsylvania.

725,011. Playing ball. Francis H. Richards, Hartford, Connecticut.

Trade Mark.

40,041. Mackintoshes and rubber coats. Hodgman Rubber Co., New York. *Essential feature.*—The representation of a shield, an eagle surmounting the same, and the letter "H" appearing upon the shield. Used since September 25, 1902.

ISSUED APRIL 14, 1903.

725,171. Means for repairing punctured pneumatic tires. Charles R. Sutton, Dayton, assignor to Jesse M. Heckman and Harvery Snell, Union, Ohio.

725,270. Vaginal syringe. Orville P. Moon, Lorain, Ohio.

725,421. Airbrake hose coupling and valve mechanism. George B. Dinkins, assignor of one-half to James W. Craig and Edward C. Craig, all of Mattoon, Illinois.

ISSUED APRIL 21, 1903.

725,727. Wringer. George D. Leedle, Springfield, Ohio.

725,954. Atomizer. Moses Goldman, Pittsfield, Massachusetts.

726,009. Toy Balloon. Arrah J. Whisler, Newark, New Jersey, assignor to Rubber Balloon Co. of America, New York city.

726,095. Exercising apparatus. John E. Nightingale, assignor to Alexander A. Whitely, both of New York city.

726,122. Rubber nipple for nursing bottles. Walter F. Ware, Camden, New Jersey.

726,164. Cushion [for use by invalids]. Daniel Hogan, New York city, and Christian W. Meinecke, Jersey City, New Jersey, assignors to Meinecke & Co., New York city.

726,204. Thermophoric mixture. Ignaz Timar, Berlin, Germany, assignor to Fritz Heiliger, Andernach, Germany.

726 208. Combination eraser. Eugenie M. Wilson, Washington, D. C.

ISSUED APRIL 28, 1903.

726,357. Dress shield. Frederick A. Schultz, Hasbrouck Heights, New Jersey, assignor to Mattson Rubber Co., New York city.

726,400. Tufting machine. William E. Buser, Chillicothe, Ohio.

726,405. Cushion heel for boots and shoes. John Coffman and George Dorn, Youngstown, Ohio.

726,464. Cushion heel. Henry F. Rooney, Randolph, Massachusetts.

726,471. Golf ball. Friend W. Smith, Jr., Bridgeport, Connecticut, assignor to Holdrege Co., New York city.

726,495. Fountain pen. John Barnes, assignor to W. F. & John Barnes Co., all of Rockford, Illinois.

726,502. Golf ball. George Browning, Hinsdale, and Charles E. Boutwood, Rogers Park, Illinois.

726,503. Golf ball. George Browning and Charles E. Boutwood, Hinsdale, Illinois.

726,504. Golf ball. *Same.*

726,643. Rubber horseshoe. John J. Colleran, Toronto, Canada.

726,730. Wire covered hose. John F. McGuire, Akron, Ohio, assignor to The B. F. Goodrich Co.

726,784. Life preserver and swimming apparatus. Wiley P. Tibbits. Toledo, Ohio.

726,791. Depurator. Charles E. H. Armbuster, Denver, Colorado.

Trade Mark.

40,226. Certain named electrical conductors or wires. The Okonite Co., Limited, New York city. *Essential feature*—A semicircular zone or belt having represented upon its surface woven, plaited or braided strands or fibers, and upon or across said surface the word "Foorperif" is printed or otherwise represented. Used since March 15, 1903.

[NOTE.—Printed copies of specifications of United States patents may be ordered from THE INDIA RUBBER WORLD offices at 10 cents each, postpaid.]

THE BRITISH PATENT RECORD.

[* *Denotes Applications from the United States.*]

APPLICATIONS—1903.

4,203. B. Blundstone and D. Moseley & Sons, Limited, Manchester. Improvements in the manufacture of India-rubber goods and apparatus therefor. Feb. 23.

4,222. F. Baines, Wellington road, London. Puncture proof shield for pneumatic tires. Feb. 23.

4,277. E. B. Killen, Belfast. Solid rubber treading tire. Feb. 24.

4,321. E. Girard and M. Ripert, 111, Hatton garden, London. Method of inflating pneumatic tires. Feb 24.

4,343. R. H. Bicknell, Westminster, London. Motor car tires. Feb. 24.

4,351. E. E. Gold, 70, Chancery lane, London. Hose coupling. Feb 24

4,440. L. Eilersten, 72, Cannon street, London. Process for avoiding the change of color of plastic substances used in the manufacture of denture apparatus. Feb. 25.

4,522. J. T. Allred, Manchester. Pneumatic tire. Feb. 26.

4,695. E. H. Seddon, Manchester. Pneumatic tire. Feb. 28.

4,748. J. P. O'Donald, Westminster, London. Hose coupling. Feb. 28.

4,788. H. Coyle, Jr., Glasgow. Pneumatic tire. Mar. 2.

4,852. A. Brander, 46, Lincoln's Inn Fields. London. Pneumatic tire. Mar. 2.

4,864. J. Myers, 40. Chancery lane, London. Packing gasket. Mar. 2.

5,067. H. Sandwith, 75, Chancery lane, London. Resilient tire for vehicles. Mar. 4.

5,147. R. E. B. Crompton, 55, Chancery lane, London. Armored cover for elastic tires. Mar. 5.

5,163 L. Peter, 53, Chancery lane, London. Closing punctured air tubes of tires. (Communicated from Germany.) Mar. 5.

5,212. J. Wetter, Strand, London. Elastic tire for vehicles. (H. Bremer, Germany.) Mar. 5.

5,222. H. Beckwith, Stockport. Fire hose nozzle. Mar. 6.

5,312. Long Acre Motor Car Co., Limited, and two others, London. Improvement in resilient tires and means for attaching same. Mar. 6.

5,313. J. Dowell and Allen & Hanbury's, Limited, London. Nipple for nursing bottles. Mar. 6.

5, 345. E. Gormly and R. J. Hall, Liverpool. Golf ball. Mar. 7.

5,354. E. Morgan, Birmingham. Prevention of puncturing and skidding of tires. Mar. 7.

5,357. A. B. MacLean, Glasgow. Golf ball. Mar. 7.

5,372. G. H. Hill and A. E. Martin, London. Tire puncture preventor. Mar. 7.

5,412. D. A. Berry, Northampton. Rubber pad for boots. Mar. 9.

5,419. A. A. Wade, Leeds. Eraser. Mar. 9.

5,464. L. Ainsworth, 9, Regent street, London. Valve for pneumatic tires. Mar. 9.

5,465. L. Ainsworth. London. Means of securing valves to tire tubes. Mar. 9.

5,467. S. Meason, 9, Regent street, London. Pneumatic tire. Mar. 9.

5,515. H. Grimshaw, Manchester. Rubber vulcanizing device. Mar. 10.

5,651. Elizabeth C. Ashmead, Paddington, London. Vaginal syringe. Mar. 10

5,665. E. Fassoirat, 65, Chancery lane, London. Pneumatic tire cover. Mar. 11.

5,823. J. Muskett, Manchester. Means of securing pneumatic tires to rims. Mar. 13.

5,827. C. A. Beldam, Liverpool. Rubber covering for handles of cricket bats, golf clubs, and the like. Mar. 13.

5,882. J. Hickling, 37, Chancery lane, London. Cycle tire. Mar. 13.

5,908. L. S. Stroyan, Derby. Golosh. Mar. 14.

6,008. J. T. Pearson, Burnley. Pneumatic collision buffers for horseless vehicles. Mar. 16.

6,010. J. C. W. Rofe, Plumstead, London. Rubber stopper for bottles. Mar. 16.

6,042. R. Raffety, Chancery lane, London. Golf ball. Mar. 16.

6,074. J. M. MacLulich, Chancery lane, London. Pneumatic tire. Mar. 16.

6,105. H. D. Traveller and L. L. Miller, Strand, London. Elastic tread horseshoe. Mar. 16.

6,129. A. McLaughlin and E. Patten, Wolverhampton. Pneumatic cycle pad. Mar. 17.

6,232. E. H. Seddon, Manchester. Pneumatic tire. Mar. 18.

6,241. A. Prox, Manchester. Manufacture of rubber rings. Mar 18.

6,332. C. A. F. Gregson and J. Hughes, Birmingham. Re-guttying of golf balls. Mar. 19.

6,397. E. Midgley, 173, Fleet street, London. Means of securing pneumatic tires or covers to wheel rims. Mar. 19.

6,440. C. A. Richardson, Liverpool. Hose coupling. Mar. 20.

6,470. L. E. Amedroz, Chancery lane, London. Golf ball. Mar. 20.

6,503. G. Steinberg, 77, Chancery lane, London. Pneumatic tire. Mar. 20.

6,564. W. L. Jackson, Glasgow. Means of securing tires to wheel rims. Mar. 21.

6,567. A. Vale, Birmingham. Fountain pen. Mar. 21.

6,608. F. Poppe and A. L. Poppe, Chancery lane, London. Pneumatic tire. Mar. 21.

6,625. F. C. Brown, 53, Chancery lane, London. Fountain pen. Mar. 21.

*6,705-6,706-6,707. K. V. Painter, 18, Buckingham street, Strand, London. Golf ball. Mar. 23.

6,802. A. E. Turner, 185, Fleet street, London. London. Brake blocks for rubber tires. Mar. 24.

6,807. J. L. Wood, Whetstone, Middlesex. Improvements in hose, applicable to syringes. Mar. 24.

PATENTS GRANTED.

[ABSTRACTED IN THE OFFICIAL JOURNAL, MARCH 4, 1903.]

*22,047 (1901). Elastic vehicle wheel. H. H. Lake, London. (Anglo-American Wheel Within Wheel Co., No. 21 Park row, New York.)

22,143 (1901). Protected pneumatic tire. M. Holaubek, Vienna, Austria.

22,201 (1901). Rubber sponge. H. H. Lake, London. (Vereinigte Gummiwaaren-Fabriken, Harburg-Wien, Harburg a/d Elbe, Germany.)

[ABSTRACTED IN THE OFFICIAL JOURNAL, MARCH 11, 1903.]

22,744 (1901). India-rubber tube [relates to connecting-pieces for uniting lengths to form long tubes]. W. P. Thomson, London. (Kölner Akkumulatoren-Werke, Gottfried Hagen, Kalk, Germany).

22,758 (1901). Method of purifying Gutta-percha. A. Combanaire and J. de La Fresnaye, Paris, France.

*22,819 (1901). Elastic heel lift [with non-slipping plug of textile fabric, saturated with rubber cement or solution; applicable also to crutch tips]. H. H. Lake, London. (C. F. Brown, Boston.)

22,826 (1901). Cushions or forms [made by stuffing a flexible covering with various materials, the whole molded in a press]. W. Lambert and J. Matas, Chemnitz, Germany.

*22,833 (1901). Bottle stopper. C. Marchand, No. 57 Prince street, New York.

22,906 (1901). Hoof pad. A. Dales, Manchester.

*22,932 (1901). Exercising apparatus. A. Browne, London. (E. Sandow, New York.)

[ABSTRACTED IN THE OFFICIAL JOURNAL, MARCH 18, 1903.]

23,026 (1901). Vehicle tire [with stiff elastic inner chambers]. A. Ducasble, Asnières, France.

23,053 (1901). Pneumatic tire with rim for the same. C. H. Gray (India-rubber, Gutta-percha and Telegraph Works Co., Limited) and T. Sloper, Wiltshire.

23,117 (1901). Rubber vehicle tire [with an outer protective rim of other material]. A. Mihatsch, Mährisch Ostrau, Austria.

23,133 (1901). Rubber boot heel. G. H. Hickson, Stockton-on-Tees.

23,427 (1901). Pneumatic tire. Franz Clouth, Cologne-Nippes, Germany.

*23,436 (1901). Solid vehicle tire. R. B. Price, No. 407 Dearborn avenue, Chicago.

23,644 (1901). Pneumatic tire [consisting of a series of inflated rubber balls enclosed in a cover]. E. Germain, Nancy, France.

23,663 (1901). Pneumatic tire. Franz Clouth, Cologne-Nippes, Germany.

23,775 (1901). Vehicle tire [with solid rubber tread, beneath which are series of springs]. C. H. Wilkinson, Huddersfield.

23,846 (1901). Method of making golf balls. J. W. Hartley, Stone, Staffordshire.

[ABSTRACTED IN THE OFFICIAL JOURNAL, MARCH 25, 1903.]

23,933 (1901). Hoof pad. F. Symons, Burwood, New South Wales.

23,988 (1901). Fountain pen. E. L. Blake and R. H. Platt, Oldham.

24,202 (1901). Method of repairing punctured tire tubes. H. T. Stephens, Carmarthen.

*24,207 (1901). Pneumatic tire [single tube with tread protected by thick fibrous bands]. H. H. Lake, London. (Punctnot Tire Co., Camden, New Jersey).

24,622 (1901). Pneumatic tire [with leather outer cover]. A. J. Boult, London. (S. Bocciardo, Genoa, Italy.)

24,660 (1901). Pneumatic tire. G. W. Dawes, Hyde, Cheshire, and two others.

THE GERMAN PATENT RECORD.

PATENTS GRANTED.—1903.

141,517 (Class 22*g*). Process for protecting rubber window weather strips from effects of dampness and from sticking together. Lyding & Reinhard, Osterode a/H. Mar. 25.

141,611 (Cl. 71*b*). Elastic lacing for shoes combined with uppers adapted for opening and closing. E. Liebemann, Offenbach a/M. Apr. 1.

141,937 (Cl. 30*d*). Plaster for dental gums consisting of an elastic cap. Hermann F. Stempel, Fort Madison, Iowa, United States. Apr. 8.

141,998 (Cl. 71*a*). Elastic insole for the "Jean François" shoe, C. Breuillard, Paris. Apr. 16.

142,166 (Cl. 39*b*). Process for manufacturing a substitute for Gutta-percha, being an addition to Patent 116,092. Felten & Guillaume Carlswerk, A.-G., Mühlheim a/Rhine. Apr. 22.

DESIGN PATENTS [GEBRAUCHSMUSTER].

195,185 (Class 30*d*). Nipple with hard rubber knob and a soft rubber mouth piece, for nursing bottles. Mrs. A. Baumert, Berlin. Mar. 25.

195,592 (Cl. 21*f*). Two part insulating piece of hard rubber permitting the reception of any incandescent lamp seat in an insulated metal socket. G. Schanzenbach & Co., Munich. Apr. 1.

195,475 (Cl. 34*c*). Window cleaning device combined with a sponge and an elastic squeegee of soft rubber or leather. A. Damm, Munich. Apr. 1.

195,675 (Cl. 34*f*). Napkin holder combined with an elastic carrier attached at side of neck. E. Malessa, Potsdam. Apr. 1.

195,569 (Cl. 63*c*). Vehicle tire consisting of an air tube protected by a metallic segmental band inserted between it and the hollow felloe. M. Manuel, Mühlhausen i/C. Apr. 1.

195,678 (Cl. 63*h*). Steering bar protectors on motor vehicles, composed of bell shaped rubber buffer attached to the bar. H. Courtois, Eschenbruch. Apr. 1.

195,527 (Cl. 64*a*). Bottle stopper with rubber covering. Baumcher & Co., Dresden. Apr. 1.

195,432 (Cl. 71*c*). Pneumatic shoe last of rubber, the upper part covered with inelastic cap carrying a back-pressure valve. R. Waxweiler, Cologne a/R. Apr. 1.

196,222 (Cl. 34*g*). Mattress covering with elastic fastening bands. Bassow & Köhler, M-Gladbach. Apr. 8.

195,970 (Cl. 39*a*). Mold for producing tube-like rubber purses. W. Irrgang, Markranstadt. Apr. 8.

196,176 (Cl. 63*c*). Motor-vehicle tires having a concave running surface. Hannoverische Gummi-Kamm-Compagnie, A.-G., Hannover-Limmer. Apr. 8.

195,833 (Cl 39*a*). Hollow rubber bodies combined with musical reeds. Ungarische Gummiwaaren-Fabrik, A.-G., Budapest. Apr. 8.

197,108 (Cl. 30*d*). Vaginal syringe consisting of a thin rubber sphere provided with a heavier rubber tappet combined with a chamfer for manipulation. Dr. Otto Jaenicke, Plaue a/H. Apr. 22.

196,253 (Cl. 30*g*). Rubber syringe with protruding annular collar combined with longitudinal rib on the under part. "Vulkan" Gummiwaaren-Fabrik, Weiss & Baessler, Leipzig. Apr. 22.

197,004 (Cl. 77*a*). Elongated conical shaped striking weapon of rubber, having a grip at one end and a hard resisting substance at the other. H. Kautz, Berlin. Apr. 22.

APPLICATIONS.

19,679 (Class 79*b*). Cigar making machine with elastic wrapping rollers. Otto Wartmann, London, England. Mar. 25.

ANNUAL MEETING OF THE UNITED STATES RUBBER CO.

THE eleventh annual meeting of the stockholders of the United States Rubber Co. was held at 12 o'clock M., on May 19, at the registered offices of the company in New Jersey, at New Brunswick. The annual reports of the president and treasurer were presented and accepted, and directors elected for the ensuing year. The official reports are given herewith in full:

PRESIDENT'S ANNUAL REPORT.

TO THE STOCKHOLDERS OF THE UNITED STATES RUBBER CO.: The fiscal year of the company ends March 31. Inventories of manufactured goods, stock in process, and materials, are taken as of that date, and the accounts of the company for the year are then closed. Inventories are figured at cost, or market price, whichever may be lowest.

The past season was what is termed "a good rubber winter," so far as weather is concerned, which is reflected in the volume of business done by the United States Rubber Co.

PRICES AND COMPETITION.—Prices for rubber footwear have ranged about the same as the previous year, when there prevailed the lowest prices for rubbber boots and shoes (the cost of materials being considered) ever known in the history of the trade.

As an illustration of the low prices for manufactured goods the past two years, it may be mentioned that during that period five companies manufacturing rubber boots and shoes have failed, or have retired from business.

QUANTITY OF GOODS SOLD.—The gross sales of goods by the United States Rubber Co. last year were $51,888,756.92, as against $45,917,536.84 the previous year; and the net sales (including miscellaneous goods) were $28,276,630.58, as against $25,436,150.59 the previous year—being an increase in gross of 13 per cent., and in net of 11.2 per cent.

EXPORT TRADE.—The export trade of our company, although still in its infancy, also shows an increase over the past year. I regret to state that our European manager of sales, Mr. J. W. Knott, died at London during the year.

CRUDE RUBBER.—We have continued our purchases of crude rubber on substantially the same lines as the previous year—first, through our own importations, and second, through purchases in this market when the prices here were more advantageous than to import direct.

We were interested in the "Acre concession," so called, granted by the Bolivian government to F. W. Whitridge, Esq., in association with Sir Martin Conway, which, however, owing to complications with Brazil, has been abandoned, Brazil paying an indemnity.

CONDITION OF MANUFACTORIES.—The extensive plants of the United States Rubber Co. and its subsidiary companies have been kept in thorough repair, the cost thereof, together with that of improvements made, having been charged to expense account.

TREASURER'S REPORTS.—The treasurer's reports which follow give in detail the "Consolidated General Balance Sheet of the United States Rubber Co. and its Subsidiary Companies." Also, the "Consolidated Income Statement" of the same, for the year ending March 31, 1903.

The income account for the year shows that the company has earned over and above all expenses of every kind and nature, including all interest charges—$1,342,448.32, as against $119,495.60 earnings for the previous year.

The General Balance Sheet and Income Account of the United States Rubber Co., separated from its subsidiary companies, is omitted this year, owing to the tendency to confusion where both are given. It may be stated, however, that the deficit shown last year in the balance sheet of the United States Rubber Co. taken by itself has been more than overcome by the earnings of this year.

FUNDED INDEBTEDNESS.—As was stated last year, the entire indebtedness of the United States Rubber Co. and its subsidiary companies, other than the Debentures of the Boston Rubber Shoe Co., was funded into $12,000,000, 5 per cent. Funding Notes.

By the terms of the Debentures of the Boston Rubber Shoe Co. there must at all times be in the treasury of that company *net* quick assets equal to the full amount of the debentures outstanding, which amount now is $4,800,000.

There is no mortgage debt of the United States Rubber Co. or of any of its subsidiary companies, and no outstanding notes or debentures of any of said companies other than the Funding Notes and Debentures above mentioned. The cash on hand March 31, 1903, as will be seen by the treasurer's report was $4,823,830.91.

From the earnings of the past year $1,000,000 of the Funding Notes have been purchased by the company and delivered to the Morton Trust Co., trustee, and cancelled.

OUR METHOD OF SELLING GOODS.—The recommendation made by your president last year, as to the adoption of a more liberal policy in the sale of our very large product, was, after careful consideration by your directors, approved, and the same went into effect on January 1, 1903, with results so far satisfactory.

The detailed orders received from customers from January 1 to May 15, this year, show an increase of 57 per cent. over the same period last year.

CONCLUSION.—In concluding, I wish to express the thanks of the executive to our heads of departments, superintendents of factories, and employés, who have during the past year shown much earnestness in their work, evincing a determination to do all in their power for the permanent success of the United States Rubber Co.

Respectfully submitted,
SAMUEL P. COLT,
President

New Brunswick, New Jersey, May 19, 1903.

TREASURER'S REPORTS.

UNITED STATES RUBBER CO. AND SUBSIDIARY COMPANIES.

CONSOLIDATED GENERAL BALANCE SHEET, MARCH 31, 1903.

ASSETS.

Property and plants		$47,544,286.10
Inventories, manufactured goods, and materials	$11,480,783.18	
Cash	4,823,830.91	
Bills receivable	934,251.27	
Accounts receivable	6,314,301.62	
Securities owned, including "Funding Notes" purchased	3,865,374.59	
Miscellaneous assets	755,044 07	28,173,585 64
Total assets		$75,717,871.74

LIABILITIES.

Capital stock, Preferred	$23,525,500.00	
Capital stock, Common	23,666,000.00	$47,191,500.00
Boston Rubber Shoe Co., Debentures		4,800,000.00
U. S. Rubber Co., Funding Notes		12,000,000.00
Fixed surpluses		8,134,849.37
Loan accounts payable	$1,122,000.00	
Merchandise accounts payable	1,012,644.26	2,134,644.26
Deferred liabilities		72,418.04
Surplus		1,384,460.07
Total liabilities		$75,717,871.74

UNITED STATES RUBBER CO. AND SUBSIDIARY COMPANIES.

CONSOLIDATED INCOME STATEMENT, YEAR ENDING MARCH 31, 1903.

Gross sales, boots and shoes	$51,888,756.92
Net sales, boots and shoes and miscellaneous	$28,276,630.58
Cost of goods sold	24,308,829.70
Manufacturing profits	$3,967,800.88
Freight, taxes, insurance, general and selling expenses	1,436,119.64
Operating profits	$2,531,681.24
Other income	242,716.57
Total income	$2,774,397.81

Less:		
Interest and commissions on "Funding Notes" and borrowed money.....	$785,143.35	
Interest on Boston Rubber Shoe Co. Debentures..	240,000.00	
Interest allowed customers for prepayments.....	154,346.30	1,179,489.65
Net income to surplus.....		$1,594,908 16
Deductions from surplus, bad debts, etc.....		252.459.84
Surplus for period...		$1,312,448.32
Surplus April 1, 1902.....		42,011 75
Surplus March 31, 1903		$1,384.460.07

[The treasurer of the company is JAMES B. FORD.]

AUDITOR'S REPORT.

We have examined the books and accounts of the United States Rubber Co. and its subsidiary companies for the year ended March 31,1903, and

We hereby certify that the accompanying Consolidated General Balance Sheet and Consolidated Income and Profit and Loss Accounts agree with the books of the companies, and correctly set forth the financial condition of the companies on March 31, 1903, and the results of their operations for the year ended March 31, 1903, and

That on that date the quick assets of the United States Rubber Co. and its subsidiary companies, including inventories of raw materials and manufactured goods on hand exceeded all the liabilities, other than capital stock, reserves, surplus accounts and the $12,000,000 collateral funding gold notes, to the extent of $20,411,479 27.

It is the custom of the company, in lieu of a general charge to depreciation, to charge to expense all betterments and improvements to plants and property.

HASKINS & SELLS,
New York, May 16, 1903. Certified Public Accountants.

THE ANNUAL ELECTION.

FIFTEEN directors were elected—the same number as for two years past—though the by-laws since 1899 have provided for nineteen directors. Two changes were made in the board, Walter S. Ballou, president of the Joseph Banigan Rubber Co., and Ephraim L. Corning, a director in the Boston Rubber Shoe Co., being elected in place of Middleton S. Burrill and the late Frederic C. Sayles. There were 264,890 votes cast, all in favor of the official ticket. The board is now constituted as follows, the figures in parenthesis indicating the number of full terms for which each member has been elected to date:

WALTER S. BALLOU, Providence, Rhode Island. [1]
E. C. BENEDICT, New York city. [2]
SAMUEL P. COLT, Providence, Rhode Island. [12]
E. S. CONVERSE, Boston, Massachusetts. [6]
H. E. CONVERSE, Boston, Massachusetts. [6]
COSTELLO C. CONVERSE, Boston, Massachusetts. [3]
EPHRAIM L. CORNING, Boston, Massachusetts. [1]
JAMES B. FORD, New York city. [12]
J. HOWARD FORD, New York city. [12]
FRANCIS L. HINE, New York city. [2]
HENRY L. HOTCHKISS, New Haven, Connecticut. [12]
LESTER LELAND, Boston, Massachusetts. [5]
FREDERICK M. SHEPARD, East Orange, New Jersey. [12]
FRANCIS LYNDE STETSON, New York city. [2]
JOHN D. VERMEULE, New York city. [7]

The newly elected board met in New York on May 22, and after organizing elected the following officers and executive committee for the ensuing year:

President—SAMUEL P. COLT.
Vice President—COSTELLO C. CONVERSE.
Second Vice President—LESTER LELAND.
Treasurer—JAMES B. FORD
Secretary—SAMUEL NORRIS.
Assistant Treasurer—JOHN J. WATSON, JR.
Assistant Secretary—JOHN D. CARBERRY.

The Executive Committee consists of Samuel P. Colt, Costello C. Converse, Lester Leland, James B. Ford, and E. C. Benedict.

OFFICIAL BOARDS OF THE CONSTITUENT RUBBER COMPANIES.

MEYER RUBBER CO.

[Election, March 24, 1903]

DIRECTORS: Samuel P. Colt, James Deshler, J. Howard Ford, James B. Ford, Lester Leland, H. M. Sadler, Jr., C. C. Converse.
President—J. Howard Ford.
Vice President—H. M. Sadler, Jr.
Treasurer—James B. Ford.
Assistant Treasurer—John J. Watson, Jr.
Secretary—Samuel Norris.

LYCOMING RUBBER CO.

[Election, May 18, 1903.]

DIRECTORS: J. A. Beeber, Samuel P. Colt, James B. Ford, Lester Leland, S. N. Williams.
President and Treasurer—S. N. Williams.
Secretary—J. A. Beeber.

BAY STATE RUBBER CO.

[February 18, 1903]

DIRECTORS: H. E. Converse, Lester Leland, F. T. Ryder.
President—H. E. Converse.
Treasurer—Lester Leland.
Secretary—F. T. Ryder.

NATIONAL INDIA RUBBER CO.

[Election, April 14, 1903]

DIRECTORS: Samuel P. Colt, Henry L. Hotchkiss, Charles A. Emerson, William T. C. Wardwell, Frederick T. Ryder.
President and Treasurer—Samuel P. Colt.
Secretary—Walter de F. Brown.

GOODYEAR'S INDIA RUBBER GLOVE MFG CO.

[Election, May 22, 1903.]

DIRECTORS: John D. Vermeule, James B. Ford, Samuel P. Colt, C. Van Vliet, Lester Leland.
President—J. D. Vermeule.
Treasurer—C. Van Vliet.
Secretary—F. F. Schaffer.

GOODYEAR'S METALLIC RUBBER SHOE CO.

[Election, May 22, 1903.]

DIRECTORS: John D. Vermeule, Lester Leland, Samuel P. Colt, James Ford, Costello C. Converse.
President—Samuel P. Colt.
Treasurer—Wm. T. Rodenbach.
Assistant Treasurer—A. H. Dayton.
Secretary—Charles T. McCarthy.

BOSTON RUBBER SHOE CO.

[Election, May 4, 1903.]

DIRECTORS: Elisha S. Converse, Ephraim L. Corning, Costello C. Converse, Henry E. Converse, Erskine F. Bickford, Lester Leland, Samuel P. Colt.
President—E. S. Converse.
Vice President—C. C. Converse.
Treasurer and General Manager—Lester Leland.
Assistant Treasurer—Harry P. Ballard.
Secretary and Assistant General Manager—Frederick T. Ryder.

AMERICAN RUBBER CO.

[Election, May 5, 1902—Election 1903 adjourned.]

DIRECTORS: William R. Dupee, Samuel P. Colt, Harry E. Converse, Lester Leland, Costello C. Converse.
President—William R. Dupee.
Treasurer and Clerk—George P. Eustis.

BOSTON RUBBER CO.

[Election, May 5, 1902—Election 1903 adjourned.]

DIRECTORS: S. Lewis Gillett, George P. Eustis, Samuel P. Colt, Harry E. Converse, Lester Leland.
President—S. Lewis Gillett.
Treasurer and Clerk—George P. Eustis.

NEW BRUNSWICK RUBBER CO.

[Election, March 24, 1903]

DIRECTORS: Samuel P. Colt, James Deshler, James B. Ford, H. M. Sadler, Jr., John J. Watson, Jr.
President—James Deshler.
Treasurer—John J. Watson, Jr.
Secretary—H. M. Sadler, Jr.

COLCHESTER RUBBER CO.

[Election, 1896.]

DIRECTORS: Samuel P. Colt, Robert D. Evans, Henry T. Bragg, H. M. Sadler, Jr.
President—Samuel P. Colt.
Treasurer—Henry T. Bragg.

JOSEPH BANIGAN RUBBER CO.

[Election May 11, 1903]

DIRECTORS: Walter S. Ballou, Edward R. Rice, Samuel P. Colt, John J. Watson, Jr., Homer E. Sawyer.
President, General Manager and Secretary—Walter S. Ballou.
Treasurer—John J Watson, Jr.

WOONSOCKET RUBBER CO.

[Election May 11, 1903]

DIRECTORS: Samuel P. Colt, John W. Ellis, Walter A. Read, James Harris, Walter S. Ballou, Homer E. Sawyer, John J. Watson, Jr.
President—Samuel P. Colt.
Treasurer and Secretary—Clarence H. Guild.
General Superintendent—John Robson.
Superintendent—George Schlosser.

MARVEL RUBBER CO.

[Election May 11, 1903.]

DIRECTORS: Samuel P. Colt, John W. Ellis, Walter A. Read, James Harris, Walter S. Ballou.
President—Samuel P. Colt.
Treasurer and Secretary—Clarence H. Guild.

THE L. CANDEE & CO.

[Election May 11, 1903.]

DIRECTORS: Henry L. Hotchkiss, Samuel P. Colt, James B. Ford, Lester Leland, H. Stuart Hotchkiss.
President—Henry L. Hotchkiss.
Vice President and Secretary—H. Stuart Hotchkiss.
Treasurer—George E. Bailey.

HAMMOND BUCKLE CO.

President—H. L. Hotchkiss.
Secretary and Treasurer—A. D. Field.

RUBBER SHOE FACTORIES LATELY CLOSED.

WHILE President Colt, in his report in the foregoing pages, mentions five rubber shoe factories as having been unsuccessful of late, no intimation is given of their identity. In this connection it may be of interest, however, to present a record of the independent shoe factories, founded since the organization of the United States Rubber Co. that are not now doing business:

MODEL RUBBER CO.

INCORPORATED July 14, 1899, under Rhode Island laws, by former employés of the Woonsocket Rubber Co.; capital stated at $100,000. A plant costing $43,000 was built and equipped at Woonsocket, Rhode Island, and the making of third grade shoes begun early in January, 1900—daily capacity 1800 pairs—the first goods being shipped on January 25. The factory was run through the year and then closed indefinitely. May 24, 1901, factory leased to the Empire State Rubber Co, incorporated in Delaware; capital, $50,000. Work was begun June 3 and continued intermittently a few months. Creditors of the Empire company filed a petition in bankruptcy against it October 29, 1901, and the lease was surrendered December 18. Factory sold August 21, 1902, to Fred L. Smith.

MILLTOWN INDIA RUBBER CO.

INCORPORATED July 27, 1899, under New Jersey laws, through the efforts of the late John C. Evans, long superintendent for the Meyer Rubber Co.; capital authorized, $200,000. Factory was built at Milltown, New Jersey, many residents becoming stockholders; amount invested reported at $145,000. Formal opening of the factory, August 27, 1900. The death of Mr. Evans, president and manager of the company, on February 5, 1902, practically put an end to the business. Receivers were appointed, and at public sale on June 19, 1902, the property was bought by Fred L. Smith for $66,500.

BYFIELD RUBBER CO.

INCORPORATED September 10, 1897, under Rhode Island laws; capital, $25,000. Organized in October of that year, with Fred L. Smith president. Acquired a factory at Bristol, Rhode Island, which was enlarged from time to time, until the daily production reached 4500 pairs of third grade rubber shoes and tennis goods. The factory was closed indefinitely in November, 1901, and on May 16, 1902, Fred L. Smith wrote to THE INDIA RUBBER WORLD: "The writer is president, T. McCarty vice president, and R. G. Burlingame secretary; the stock is held by us."

CONCORD RUBBER CO.

INCORPORATED April 15, 1899, under Maine laws; capital authorized, $500,000, of which $145,000 is reported to have been paid in. Bought unused factory building at Concord Junction, Mass., and began making shoes November 8, 1899; capacity reported at 5000 pairs daily, production probably reached 3000 pairs. Factory closed April 15, 1903.

THE TEXTILE GOODS MARKET.

IT would require retrospection extending over a long period to find a parallel to the present situation in the market for raw cotton and finished goods. May has been prolific of exciting features, especially in the staple market. The evolution from a condition which was a short time ago entirely in control of the buyer, to one in which the seller wields the scepter, indicates beyond peradventure that prices are governed by other than immediate causes. The feeling is entertained by some of the best posted men in the trade that a pronounced decline in cotton is not unlikely to come very soon, inasmuch as the prices prevailing are not so much the result of a legitimate consumptive demand as they are of the speculative campaign waged by the "bulls" of the cotton pit. Viewed in this light, it is reasonable to look for a condition soon that will redound to the benefit of both the buyer and seller. This deduction is what has caused so much reluctance on the part of buyers to operate more freely during the month; at the same time the fact must not be lost sight of that the goods that have been offered were not made from cotton that cost more than 8½ cents, and yet there is very little profit, if any, for the manufacturer even on this basis. That is the reason that he has refrained from granting concessions in scores of instances where business might be greatly stimulated thereby. Instances of curtailment, or shutting down altogether, are numerous in the South and East. There are other manufacturers who believe this course would be impracticable, for obvious reasons. The mills have practically no stocks of goods, for they have sold out nearly everything, and have not been making up stocks at the risk of cotton falling. Few mills, if any, have bought cotton at 12 cents, and those who have done so, are in possession of contracts that must be executed at a certain time. There are a number of mills, on the other hand, who have run out of orders for goods, and have cotton left over. In such cases they have sold the cotton at an immense profit, some of them realizing 4 cents a pound, or $20 per bale. Following figures are the prices of spot cotton at the various ports:

	New York.	New Orleans.	Liverpool.
May 2	10.75c.	10 5/16c.	5.56*d*
May 9	11.15c.	10 7/16c.	5.70*d*
May 16	11.40c.	11 3/4c.	6.14*d*
May 23	12.00c.	11 7/16c.	6.40*d*

The operations of the rubber manufacturers in the cloth market have been influenced the same as other consumers by the prices which manufacturers of cotton sheetings and ducks have asked for their products. While the rubber manufacturers have realized keenly the position of the cloth maker, knowing that he has not been receiving a price for his goods that is on a parity with the cost of raw cottons, it has been for the interest of the consumer to refrain from anticipating his requirements in the future, and confine his purchases to immediate needs. The month past has been a quiet one with the rubber consumers of sheetings, as many of them have shut down for their annual repairs, and have therefore not been consuming a great deal of cloth. They are commencing again, however, to attend to their needs, and are visiting the market for sheetings. These goods have not advanced to any extent during the month, although they are firm at quotations, and sellers regard them reasonable when compared with the cost of production. The market is not in possession of abundant supplies of the grade of sheetings which the rubber trade demand, and the mills are not likely to increase the stocks so long as cotton maintains its present level. It therefore behooves the rubber manufacturer to use the best judgment in considering his requirements in this direction. From what can be learned by diligent inquiry among the representatives of the cotton mills making this class of sheetings, there is very little possibility of current prices going down for some time to come. This assertion holds good even though the price of staple cotton goes off materially, for the price of goods is not based on the present price of raw cotton, but on cotton which had been bought at around 8 cents a pound. The rubber trade will therefore find the following prices of sheetings accurate at the present time, with a possibility of advances in case cotton continues to rise:

Forty-inch Majestic C. C.	6¼ cents.
Forty-inch Majestic B. B. B.	6½ cents.
Forty-inch Majestic B. B.	6⅛ cents.
Forty-inch, Elcaney	5⅛ cents.
Thirty-six inch, India	5⅛ cents.

FABRICS FOR THE RUBBER TRADE.

Sheetings.			
40″ Highgate	5¼c.	40″ Selkirk	6⅛c.
40″ Hightown	5½c.	40″ Sellew	6⅜c.
40″ Hobart	6 c.	48″ Mohawk	9½c.
40″ Kingstons	7 c.	40″ Marcus	4⅞c.
39″ Stonyhurst	5 c.	40″ Mallory	4¼c.
39″ Sorosis	4¾c.	36″ Capstans	3¾c.
40″ Seefeld	7 c.	*Osnaburgs.*	
40″ Selkirk	6⅛c.	40″ Iroquois	8¼c.
40″ Sellew	6⅜c.	40″ Shamrock	8 c.
48″ Mohawk	9½c.	*Ducks.*	
40″ Marcus	4⅞c.	40″ 7 oz. Cranford	7¾c.
40″ Mallory	4¼c.	40″ 8 oz. Chartres	8½c.
36″ Capstans	3¾c.	40″ 10 oz. Carew	10¼c.
Osnaburgs.		40″ 11 oz. Carita	11¼c.
40″ Iroquois	8¼c.		
40″ Shamrock	8 c.		
Ducks.			
40″ 7 oz. Cranford	7¾c.		
40″ 8 oz. Chartres	8½c.		
40″ 10 oz. Carew	10¼c.		
40″ 11 oz. Carita	11¼c.		

The demand for hose and belting duck has been somewhat disappointing to the textile trade during the whole of May. Manufacturers of hose and belting, in placing their contracts for the year, anticipated a normal demand, but the cold weather of last summer caused considerable of this material to be carried over, and it is doubtful if the maximum quantity is taken, although the past few warm days caused quite a spurt in the demand for hose, which was reflected in the duck market. Concerns buying as they have use for the goods are finding the market strongly against them, and in some cases they are paying a radical advance for their takings. From the present standpoint it looks as if the rubber trade will be compelled to pay a much higher price for textiles when they come into the market to renew contracts this fall.

Felt manufacturers are holding their prices firm at recent advances, and some of them are looking for still higher prices on account of the strong position which wools are holding all over the country. During the past month there has been a very good demand for felts from the manufacturers of boots and shoes. The Binghamton (N. Y.) Felting Co. have been receiving such a flattering demand from the rubber shoe trade that it has greatly increased its capacity for turning out goods.

THE RUBBER TRADE IN TRENTON.

BY A RESIDENT CORRESPONDENT.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The Reliance Rubber Co., organized in March, expect to begin the manufacture of a general line of mechanical rubber goods about June 1. The company was incorporated April 6 with a capital of $25 000. The officers are W. Holt Apgar, president; Ezra Evans, vice president; John W. Burd, secretary; Albert W. Lee, treasurer.

The company have leased the old Brookville grist mill just at the northern edge of the city. The building is about 100 × 40 feet, two stories high. The mill has been thoroughly overhauled and remodeled to suit the needs of the lessees and has been equipped with the necessary machinery of the most modern pattern by William R. Thropp, of Trenton. The plant will be operated by water power. Charles A. Joslin, formerly superintendent of the Globe Rubber Co. factory and later connected with the United and Globe company, has been engaged as superintendent. Mr. Joslin stated to your correspondent that the company would make a line of high grade mechanical rubber goods, and when operated to its full capacity the mill would employ fifty hands.

The case of Colton Fulton *v.* Grieb Rubber Co. was tried in the Mercer court May 14. Fulton was an employé of the company, and in September, 1899, had both hands taken off in the rolls of an India-rubber mixing machine in the defendant company's factory. The plaintiff claimed that a shock from an electric light wire suspended near the machine caused him to slip, throwing his hands between the rolls. The defendant fought the case from every point, and claimed that the accident was the young man's own fault. The jury awarded Fulton $3000. The case was a retrial. It was tried first in January, 1902, when the plaintiff was awarded a verdict of $6500, which was set aside on appeal. Since the new trial the counsel for the company has made application for a new trial, and Justice Swayze, of the Supreme court, has granted a rule to show cause why a new trial should not be granted. The rule is returnable in June, and will be argued in November.

David Bumster, an employé of The Eureka Rubber Manufacturing Co. of Trenton, had his left arm crushed in the machinery at the mill May 14. He was working on a three-roll "cracker," the only one in the city, when the sleeve of his jumper caught in the rolls and in an instant his arm was drawn into the machine. His arm was crushed for its entire length, and at the hospital was amputated at the shoulder. He is improving as fast as can be expected. The safety clutch on the machine was quickly applied by a fellow workman and that probably saved his life.

William H. Skirm, Jr., since 1893 secretary of the Empire Rubber Manufacturing Co., resigned that position on May 1. He is succeeded by A. Boyd Cornell, son of Surrogate John W. Cornell, of this county. Mr. Cornell is a graduate of Princeton University, class of '01, and has been connected with the company since his graduation. Mr. Skirm stated to your correspondent that he was not yet ready to announce what his future plans would be, but said that he would not be connected with the rubber industry in this city. Mr. Skirm's father, Gen. William H. Skirm, was long the president of the Empire company.

The Crescent Belting and Packing Co., have installed a battery of four new boilers, of 150 HP. each. The boilers are of the horizontal return tubular type and were built to special specifications by the John E. Thropp & Sons Co. (Trenton), and are housed in a new boiler room of brick, 40 × 30 feet. Arrangements are now under way to extend this addition to a height of three stories, the new stories to be used for additional facilities in the hose and insulated wire departments. The old boiler house will be remodelled into a machine shop, to take care of repairs to the factory.

The employés of the Lambertville Rubber Co. have formed a strong baseball club; James Markey, manager; Walter Scott, secretary; C. Spangler Stiles, treasurer.

The Eureka Rubber Manufacturing Co. of Trenton, which recently began the operation of their new factory, now have all the departments in which the machinery has been installed running on full time. J. A. Lambert, secretary and general manager, states that orders are coming in aggregating twice the capacity of the mill. Two 18″ × 50″ roll mills have been ordered and are expected soon. They will be installed as soon as they arrive. The company have their own reclaiming plant in operation.

The local union of the International Amalgamated Rubber Workers' Union of America, organized last winter, now has a membership of nearly 900. The union held a big picnic in Hill's grove on Memorial day. Headed by a band the union paraded through the principal streets to the grounds, where a program of sports was given in the afternoon, followed by a dance in the evening. The union has organized a branch in the Mercer Rubber Co.'s mill and is making arrangements to provide the union stamp to those factories that will accept it.

A protracted squabble over the purchase of 5000 feet of new hose for the fire department was settled by the common council on May 19, when that body awarded the contracts as follows: 2500 feet to the United and Globe company, 1250 feet to the Empire company, and 1250 feet to the Crescent Belting and Packing Co. When it was decided to purchase the new hose the fire commissioners recommended that 2500 feet be bought from the United and Globe company and 2500 feet from the Eureka Fire Hose Co. (New York). The fire committee of the council ignored this, and made a counter recommendation that 2500 feet be bought of the United and Globe company, and the balance equally divided between the Crescent and Empire companies. This prevailed. The matter was pending several weeks and created much discussion. The rubber workers' union petitioned the fire committee not to allow any of the contract to go outside the city.

THE RUBBER TRADE IN AKRON.

BY A RESIDENT CORRESPONDENT.

TO THE EDITOR OF THE INDIA RUBBER WORLD: There is a specimen of the *genus homo* frequently met with in Akron rubber circles, who, undoubtedly, is a near relative of the gentleman described in THE INDIA RUBBER WORLD for April—"The Man With a Rubber Secret." The specimen in question might be called "The Man With an Invention." His class is a numerous one and the marvelous idea he wishes to exploit may or may not be patented. In general, he and his manner of approach bear close resemblance to the individual possessed of a rubber substitute discovery. He is shy of clerks and salesmen, and even after he is closeted with him, who, he is at last convinced, is the head of the institution, he is apt to carry an air of mystery and to be reluctant to divulge any considerable part of his idea at one time. Instead, he threads his way in and out with many inquiries, some of them calculated to throw his listener off the track as to the nature of the true inwardness of his scheme until he feels that he may reveal himself without being sandbagged and robbed of his idea then and there. And often—most unhappily frequently, does it thereupon develop that the discovery freighting the mind of the caller is new—only to himself. If this is made known to him, it is somewhat more than probable that he will go away believing that he has been deceived and that the motive of the deception is little short of robbery. If this is not the case, the chances are that his "invention" belongs in that class of things which might be made of rubber were they not made of other material more cheaply and better. To convince him of this, however, is more easily said than done, as a rule. As a third instance his idea may possess strikingly original features, but present at once to the experienced manufacturer, busy with lines which he knows are paying the query "Is the game worth the candle? Is the experiment worth undertaking?" The answer is likely to be: "Yes, at the expense of the inventor. If he will advance the funds for experimenting, the experiments will be made and we can determine what the thing is worth. The question of royalties or purchase of patents outright can be considered later." This answer is likely to please the inventive genius not at all, and not until he has met pretty much the same reception in several establishments is he persuaded that he is not being imposed upon and his scheme rejected on grounds of jealousy, a failure to comprehend its true value or because the man to whom he has confided his project wishes secretly to avail himself of it.

All this is quite seriously true. Inquiries among manufacturers demonstrate that but a small percentage of the "brand new things" presented to their more or less willing ears are of value sufficient to make them worth more than a passing thought. And it is likewise true that manufacturers in general do not like to exploit any but absolutely "sure things" at their own expense, agreeing to pay a royalty,—which is always expected, if success attends their efforts. What they are willing to do and prefer to do even in the most promising projects, is to manufacture the goods for the inventor. Show them the invention and talk contracts for the manufacture of the article and they become interested.

Often it is true that the man with an idea wants only to be allowed to do his own experimenting. This, usually, can be arranged and the results are varying—being sometimes a winning thing and sometimes being visible only by the sudden and continuous absence of the experimenter. Men come from afar to conduct experiments in the Akron rubber factories, but a large number of the inventors are indigenous to this soil. A great many bright young men connected with the local rubber trade are making experiments, the most of them doing this work at home in spare hours. Some not at all identified with the rubber business but desirous of being, are at work also. For the most part these know valuable from valueless ideas and as time goes on their efforts are being made a matter of record at the patent office. Some very excellent inventions are to be placed to the credit of Akron men in and out of the business which has made the city famous.

* * *

IN his annual report to the Board of Public Safety, F. F. Loomis, mechanical engineer of the city of Akron, in charge of fire apparatus, etc., urgently recommends the purchase of an additional wheel to be equipped with rubber tires for all trucks and engines of the fire department for use when streets are icy. He says it would be advisable to have rubber tires on all wheels and especially so if all streets were paved. The rubber tired wheel for use in winter, Mr. Loomis states, will prevent trucks from sliding in going around corners, saving not only the trucks themselves but tending strongly to the prevention of accidents. Inquiry among rubber tire manufacturers brings the information that very many of the fire engines and trucks now manufactured are equipped with rubber tires and that in a number of cities the change from steel to rubber tires is being made on apparatus now in use. The cost of doing this, however, is preventing the making of the change by many who concede the desirability of so doing. It is a branch of the tire business which is not pushed to any great extent by the tire trade, however, as none except the very large cities would have extensive orders to place. The additional cost is scarcely an obstacle in the salesman's path and the offering of rubber tires is a distinct advantage in the soliciting of business.

* * *

THE present season is a record breaker in the hose departments and the demand for garden hose was never greater. The drouth which has prevailed throughout nearly all the states east of the Mississippi and north of Mason and Dixon's line during the greater part of May is in part responsible for it. It is not a case of the hard pushing of goods and great sales because prices are made especially attractive, but one in which hose at any price, almost, within reason, is the demand. The rush promises to keep up during a great part of the summer. "We are a quarter of a million feet behind orders now and are not beginning to catch up as yet," said one prominent manufacturer. The same doubtless is true of other factories.

* * *

THE tire output in Akron for the manufacturers' year now closing is by far greater than it ever was before. How much greater it will be, remains to be seen. It is certain that the busy season will continue later than usual. In general there has been a slight slackening of the pressure which has been so steady since the early part of the winter, but all the factories continue to be extremely busy still. Jobbers are now able to accumulate stocks and the demand from that and similar quarters becomes less insistent. There is every reason to believe that tire contracts for another year will be made at higher figures than for the passing season. The contracts are made for twelve months as a rule, and the advance in the price of raw material has reduced profits on the current year's business. So far as tires are concerned, the increase in crude gum values is for by far the greater part at the expense of the manufacturer. There is some salvation, however, in the steadily increasing knowledge of how to make tires cheaper without reducing, if not, indeed, improving their quality.

In this connection it may not be inappropriate to mention the smile of combined amusement and contempt with which Akron tire manufacturers and rubber men in general, read a recent dispatch in the newspapers, dated Colorado Springs, Colorado, purporting to relate the discovery of a method of tanning pigskin by which it became a substitute for rubber —especially so in the construction of tires. Even from the manufacturers' standpoint, however, the dispatch had one redeeming feature—novelty—rather above the average of "rubber substitute" discoveries.

* * *

THE Akron Machine Co. went into involuntary bankruptcy in the United States circuit court in Cleveland on May 13, and A. H. Commins, of Akron, was appointed receiver and authorized to continue the factory in operation. The Crucible Steel Co. of America are one of the principal creditors. A statement of the assets and liabilities has not been prepared but it is understood they are in the neighborhood of $60,000 each. This company was not extensively engaged in the rubber machinery line. M. J. Gilbo, the manager, is president and founder of the Rubber Specialty Co., but the embarrassment of the former company will not affect the latter. The recent failure of the Aultman, Miller & Co. contributed to the difficulty of the Akron Machine Co.

President O. C. Barber, of the Diamond Match Co., whose connection with the Diamond Rubber Co. has long coupled his name with the rubber trade, spoke of the labor situation in an address at a banquet of local firemen recently in a way which is being much quoted in Akron and elsewhere. "I do not," he said, "wish to be understood as antagonizing labor unions, but the tendency to shorter and shorter work days, it seems to me, is not without its undesirable side to all of us. If you want much, you must labor much. It was true in Lincoln's time and in the time of our greatest men of to-day. They wanted more than could be obtained in 8 hours of labor in 24 and won it." As the talk was addressed to many labor union men it has been much discussed by them. Mr. Barber spent a large part of May in California.

Colonel George T. Perkins, president of The B. F. Goodrich Co., was president of the Memorial day exercises on May 30. Colonel Perkins has long been depended upon to bear a considerable part of the expense and labor incident to the annual decorating of the graves of the soldiers who sleep the sleep that knows no breaking. Colonel Perkins, by the way, has a most honorable war record. He marched with Sherman to the sea and still suffers occasionally from a bad wound received in action at Chattanooga.

J. W. Kelley, prominent in the offices of The B. F. Goodrich Co., has been appointed a member of the Akron Public Library board. Mr. Kelley is an advocate of branch libraries and through his efforts one will probably be established soon, convenient to the factories of the Goodrich and the Diamond Rubber companies and other large rubber shops of the southern part of the city.

The Portage Golf Club opened their season on Saturday afternoon, May 4, the event being a social function of unusual importance locally. Dr. and Mrs. H. H. Jacobs won the chief awards. The club have arranged many more special events for the season than usual. A new course is being laid out to supply the place of the present links, which are now made less desirable by the erection of a summer home by Colonel George T. Perkins.

The Goodyear Tire and Rubber Co.'s office is so far from the course of the Portage Golf Club that a number of the employés have formed a golf organization of their own and have arranged a small but excellent course not so far from their office but that it may be readily reached when the day's grind is done. Many of the players are also members of the Portage club.

The national convention of the International Amalgamated Rubber Workers' Union of America, which was scheduled to be held in Akron in June, will not materialize at that time. There is somewhat less interest than formerly and no definite arrangements for the meeting have been made. It may be held in the fall.

Vice President J. A. Swinehart, of the Colonial Tire and Rubber Co. returned on May 19 after several months in Europe in the interest of that company. He recently closed a contract for the manufacture in Russia of the Swinehart side wire tire, which this company control in Europe. With whom the contract was made is not for the present announced. The Colonial company now have contracts for the making of their tire on royalty in all European countries—aside from Great Britain, where the rights are controlled by The B. F. Goodrich Co. —excepting only Belgium. No contract will be made in Belgium, the Colonial company doing business there in their own name. They have the tires manufactured for them in France. Mr. Swinehart was given a reception at his home here by a company of friends the evening of May 22. He reports all the European rubber factories exceedingly busy, especially in making both pneumatic and solid tires.

The Firestone Tire and Rubber Co. have had the busiest spring in their history and are still working double turn. They are making a large number of 6-inch tires for steam and electric trucks. The need of additional room is being felt and the company's office will probably be moved into another building in order to provide it.

The Stein Double Cushion Tire Co. have not completed their tests and experiments with their "Bike" wagon tire which was brought out early the present spring. For their regular tires they have had a good demand. The company are planning to engage also in the manufacture of automobile tires in time for next season's business.

Charles H. Wheeler, formerly president of The India Rubber Co., has purchased a farm near Kent, ten miles from Akron, and is enthusiastic in its management. He will spend much of the summer there.

Superintendent Joseph Dangel, of the local plant of the American Hard Rubber Co., sailed from New York, on May 28, to visit Mrs. Dangel's mother in Germany.

Vice President B. G. Work, of The B. F. Goodrich Co., accompanied by Mrs. Work, is spending several weeks abroad. They will return in June.

H. E. Raymond, sales manager of The B. F. Goodrich Co., believes with President Roosevelt in working hard when at work and playing with all his might when at play. Following his custom of the past dozen years he will spend July and August abroad.

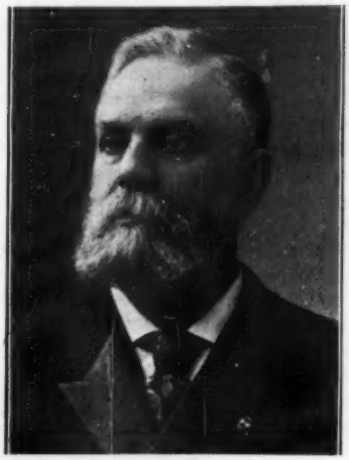
No decision has been reached, it is said, with reference to the rebuilding of the plant of The India Rubber Co., destroyed by fire on March 26. There are rumors that the works are to be reëstablished at Brunswick, New Jersey, where the Rubber Goods Manufacturing Co., of which the India Co. are a part, have a factory. These are all unverified. Wreckage of the fire is being overhauled and disposed of, rubber stock of any value being sent to other factories of the Rubber Goods company. The machine shop, which was not destroyed, is in operation on orders for these other factories also. While no statement as to the future has been made either by President L. D. Parker, who has been here, or by W. L. Wild, the local manager, it is understood in Akron that the works are not to be rebuilt in this city.

AN INTERVIEW WITH COLONEL POPE.

THE Pope Manufacturing Co., incorporated in New Jersey on February 27 last, with $22,500 capital, on May 1 filed with the secretary of state amended articles of incorporation, increasing the authorized capitalization to $22,500,000. The plan involves the issue of 25,000 shares of 6 per cent. cumulative first preferred stock; 100,000 shares 5 per cent. second preferred stock, cumulative after February 1, 1905; and 100,000 shares common stock. The object of the new company, as already stated in these pages, is to acquire the business of the American Bicycle Co. and the related companies.

On May 14 Colonel Albert A. Pope assumed actively the duties of president of the Pope Manufacturing Co., in the old quarters of the American Bicycle Co., No. 19 Park row, New York. It is understood that one of the first departments to be organized in the new company was that having charge of advertising, though extensive advertising will not begin until next season. President Pope is quoted as saying: "Starting now, at a time of year when bicycle manufacturers usually owe a lot of money, we are free from debt, have plenty of capital, and a determination to restore the bicycle to the place where it belongs."

The great amount of interest that rubber manufacturers have long felt in the work of Colonel Pope led THE INDIA RUBBER WORLD to seek him in his Park row sanctum recently and indulge in a heart-to-heart talk with the foremost figure in the manufacture of American bicycles. In appearance the Colonel is as young as he was five years ago, and he is full of his old time energy and enthusiasm. A point of paramount importance that the interviewer wished settled was whether the new Pope Manufacturing Co. intended to purchase their tires of existing rubber manufacturers, or whether they would erect a new factory and manufacture for themselves. This question was fired at the Colonel at the start, and with his usual alertness he promptly said that it was not a fair question, and that if it was he should have to be excused from answering. Speaking further of tires he said that, although the type of tire was a matter for experts to settle, he still believed that the single tube was as practical and popular as ever, and as far as he could see was likely to continue so.



ALBERT A. POPE.

Defining briefly the policy of the new company, Colonel Pope said that last year, which was a bad year for the sale of bicycles, there were sold something like 600,000 wheels, and that although nobody had any definite figures, during the palmiest days of the bicycle manufacture there were something like 1,500,000 wheels made in a year. A point that he emphasized was that this was before the cheap wheels had come into the market and purchasers had become disgusted with inferior products. Replying to a question he said that he believed that there was a normal market in the United States for 1,000,000 wheels a year. The plan of the company now is to turn out high grade wheels at a fair price; his theory being that there are thousands of people who would rather pay $60 for a good wheel than to pay $40 for one of another sort. When asked if the price of bicycles as a rule would be lower than they have been in the past, the Colonel waxed highly indignant, pointing out that as all the companies had lost money at the present prices, the natural policy must be better goods at a higher price.

Colonel Pope makes no secret of favoring a comprehensive plan for interesting the whole American public in cycling, and as a beginning has formed a Publicity Department at the head of which is one of his Boston lieutenants, R. L. Winkley. He also expressed himself in favor of the suggestion that automobile clubs admit bicycle riders, giving them the same attention and service that automobilists have, and further that in their own interest automobilists, bicyclists, and good roads men should all stand together. He felt that if they did so very rapid progress would be made, better laws passed, and that the time would come—and very shortly—when in a city like New York it would be as much against the law to drive a horse through the street as it is at present to drive cattle and hogs.

Colonel Pope on May 19 paid a visit to the "Columbia" bicycle factory at Hartford, Connecticut—the factory in which his successes as a bicycle manufacturer were won. At a luncheon spread in the dining room of the factory, in a speech to the 800 employés, Colonel Pope said, as reported in *The Bicycling World*:

"Now I have come back to my own. Much against my will, but on the advice of my friends, some of whom perhaps were not friends, I sold out this plant, believing that things would go on as well as ever. But it was a mistake; forty-four concerns all tumbled to ruin under that management. My advice was never listened to, and the forty-four concerns combined against me. I have returned under the only conditions that would bring me back—at the head of the concern."

Colonel Pope will reside hereafter in New York, where his office is. The full list of officers of the Pope manufacturing Co. has not yet been completed. There are now fifteen factories under control of the company. Colonel Pope celebrated his sixtieth birthday on May 20.

GUTTA-PERCHA COMPOUND.

IN order to obtain in a single preparation the combined properties of Gutta-percha and cement, Emil Herbst, D. D. S. of Germany, has devised the following method: A given quantity of cement powder is mixed thoroughly with an equal amount of baseplate Gutta-percha filings, and into the resulting mixture a small amount of cement liquid is incorporated. This paste becomes thoroughly hard and can be advantageously used in setting crowns and bridges. It becomes soft and malleable when heated, and therefore a bridge set with it can be easily removed. Incidentally he refers to another method of obtaining a Gutta-percha-cement compound, which consists in mixing together equal quantities of cement paste and Gutta-percha solution. This combination makes a preparation which easily adheres to the walls of the tooth and becomes slightly soft upon being heated. Dr. Herbst offers these methods as mere suggestions on the possibilities of mixing cement with Gutta-percha with the object of obtaining a material possessing the advantages of both, and he says that the results obtained in the few cases in which he has tried the combination would warrant its further trial by the profession.—[Abstracted by *The Dental Cosmos* from the *Deutsche Zahnärztliche Wochenschrift*.]

A LATHE FOR HARD RUBBER.

THE lathe shown in the accompanying illustration is made specially for hard rubber work. It has a swing of 10 inches and will turn stock as long as 15 inches. When the character of the work requires it, the lathe is fitted with a hollow spindle by means of which longer stock, up to ⅝ inch in diameter, can be turned. By using a frazing tool, stock not longer than 6 inches can be turned down to $\frac{1}{32}$ of an inch in diameter. Attached to the headstock and tailstock are adjustable tool-holder rests. When short stock is to be worked, the tailstock can be taken off and the steady rest used as a tool holder rest, thus enabling the lathe to be operated rapidly and conveniently.

On the spindle, to the left of the driving pulleys, is the threading hub which engages the leader, or chasing finger, attached to one end of the threading tool holder. This is so made as to be easily removed from the spindle, thus making it possible to cut any desired number of threads on the lathe.

The lathe is fitted with a very accurate universal chuck, which can be easily removed and the faceplate, shown in illustration, can be readily attached. It is driven by tight and loose pulleys, 3½ inches in diameter by 1¼ inch face, and, for the work it is generally used, runs at about 2000 revolutions per minute.

The lathe, as shown, stands 3 feet 6 inches high to the center of the spindle, and is fitted with a hard wood shelf at the back. When the lathe is used with the short legs it stands 12 inches high to the center of the spindle. When desired, a special bed is furnished by means of which the lathe can be bolted to the side of a bench.

A faceplate, short and long tool rests, two tool holders, one threading tool holder, extra centers, necessary wrenches, etc., are furnished with each lathe. The shipping weight of the lathe is 225 pounds with the long legs and 165 pounds with the short legs. That the lathe is serving its purpose well is shown by the fact that hundreds have been manufactured during the past thirty years. They are manufactured by James Smith, Seymour, Connecticut.

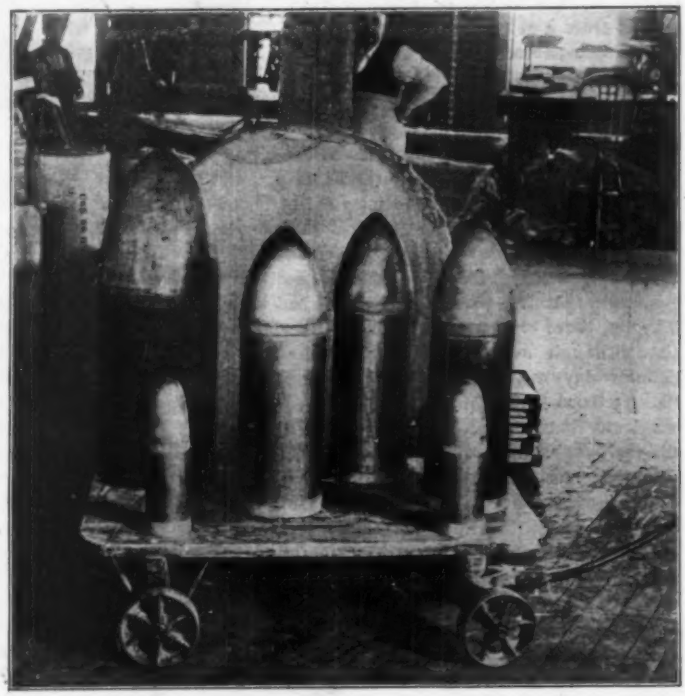
The chuck referred to above was invented by James Smith in the "sixties" and is claimed to be the first universal chuck invented in the United States. That it answers the purpose for which it was designed is attested by the fact that it has been manufactured continuously since the time it was invented, in spite of the many that have appeared on the market since that time.

RUBBER SHELLS IN ARTILLERY PRACTICE.

AN interesting illustration of one of the many uses to which rubber is adapted was recently given in Brooklyn (New York) at a public exhibition in the armory of the Thirteenth regiment. The occasion was the review of the regiment by William Cary Sanger, assistant secretary of war of the United States. A novel portion of the evening's exercises consisted of artillery practice with 4 inch and 8 inch India-rubber shells. The squad in charge of the 4 inch gun succeeded in hitting the target almost every shot. The best shot of the performance however—and indeed the best shot ever made in this kind of practice—was made by the squad in charge of the 8 inch gun, who hit a target consisting of a cartridge placed upright on the floor. Altogether, it was a remarkable demonstration of what may be accomplished by indoor artillery practice in all the large armories in the country and caused much favorable comment from the members of the regular army who were present.

The difficult part of the construction of shells for this work was to get an article which would take the rifling of the gun without being soon cut up and destroyed, or fit so tightly as to destroy the progress of the shot, on account of the friction. A number of experimental shells had been made previously, but they all failed in this point, being wabbly and so uncertain, that one shot following another would hardly ever strike in the same spot. The present shells, however, are so successful, that when a rifle is once aimed, the shots will continue hitting the target, one after the other, thus making practice work of real practical value. The rubber shells, of which a photograph is here given, were made by the Voorhees Rubber Manufacturing Co. (Jersey City, New Jersey) who have made a reputation as manufacturers of difficult specialties.

It may interest some of our readers to state that the father of Mr. Sanger, named above, was one of the old New York firm of Cary, Howard & Sanger, in which the late Richard Butler was an unnamed partner, and who jobbed rubber goods.



RUBBER AND GUTTA-PERCHA EXPLOITATION.

GUTTA-PERCHA CONCESSION FOR AN AMERICAN.

WILLIAM ALLEYNE IRELAND, of Boston, Massachusetts, has obtained from the government of British North Borneo a concession entitling him to select any number of tracts of land within the domain of that government, not exceeding in the aggregate 20,000 acres, for the purpose of collecting native India rubber and Gutta-percha, under exclusive rights, and of planting and cultivating native or foreign species of India-rubber and Gutta-percha. The lessee is to form a company with a capital of not less than $100,000, gold, and to prospect for and select with as little delay as possible suitable lands, for which purpose two years, from September 22, 1902, will be allowed. Within one year from the selection of each tract, the work of developing it must be begun. The term of the lease is 999 years. A nominal sum in the form of quit rent is to be paid each year to the government, and all India-rubber or Gutta-percha produced shall be liable to an export duty—not more than 10 per cent. *ad valorem*, based upon current prices at Sandakan, and in no case more than is exacted of other shippers from the state. The lessee in selecting any tract may apply for the privilege of removing timber or other produce than India-rubber and Gutta-percha, but in all cases the mineral rights are reserved to the government. The concession also contains specifications respecting the planting of India-rubber and Gutta-percha.

Mr. Ireland was lately in British North Borneo engaged in the study of problems of colonial administration, as one of the special commissioners sent out for this purpose by the University of Chicago. He is a brilliant writer and lecturer, whose topics generally have related to systems of colonial government. He has published works on "Tropical Colonization," "The Anglo-Boer Conflict," "Demarariana," etc., and numerous contributions to the *North American Review*, *Atlantic Monthly*, and other periodicals. He has spent many years in Australia, the East and West Indies, and other tropical countries.

British North Borneo, in the extreme northern portion of the island, has an area of about 40,000 square miles. The capital, Sandakan, is 1000 miles from Singapore, 660 miles from Manila, and only separated by the Sulu sea from the southern Philippine islands. Gutta-percha has been found in every part of Borneo yet explored, and to-day the island ranks next to Sumatra in the total production of Gutta-percha. British North Borneo of late has shipped considerable gutta, though the trade has been left entirely to the Chinese, and no comprehensive plans for the exploitation of the interior have been undertaken. American capital on a large scale in that quarter would be welcomed by other traders than the Chinese, as it would tend, in connection with American interests now developing in the nearby Philippines, to break the Chinese monopoly in Gutta-percha which has existed so long.

A ONE HUNDRED PER CENT. DIVIDEND.

ANTWERP journals predict that at the general assembly of the Anglo-Belgian India-Rubber and Exploration Co. (the Société A B I R), on June 1, when the reports for 1902 will be presented, a dividend of 500 francs per share will be declared. Originally the capital was stated at 1,000,000 francs—2000 shares of 500 francs each. Since the reconstruction of the company the capital has been given as 2000 shares, value not stated, but the actual amount of capital is supposed not to have been changed. A dividend of 500 francs per share, therefore, means a dividend of 100 per cent. One half the profits go to the Congo Free State, in return for which the Société A B I R have a monopoly for thirty years of about 470 square miles of rubber territory, on the Lopori and Maringa rivers, in the Equateur district. The business of the company has been less profitable of late, however, than in some former years. The dividend for two years ago was 2100 francs per share, equal to 420 per cent. At the beginning of 1901 shares were sold as high as 28,925 francs, or practically 60 for one; on May 1 last, the quotation was only 15,350 francs. During 1902 THE INDIA RUBBER WORLD recorded arrivals of rubber at Antwerp for the account of the Société A B I R to the extent of 841,060 pounds. A dividend of 100 per cent. on the company's capital would require a profit of 23 cents per pound on this amount of rubber.

RUBBER PLANTING IN UGANDA.

IN a report on the "Exotic Plants of Economic Interest in the Botanic Gardens at Entebbe, Uganda," Mr. J. Mahon, in charge, writes: "We have a large number of *Landolphia* seedlings which were obtained from Sesse [Islands] in 1900. Nothing is more puzzling than the slow rate at which this common native plant grows under cultivation. It is quite clear that it requires to be sown where it is intended the plants are to remain. It resents transplanting, and some seedlings we put at the base of trees in a stretch of forest to grow *au naturel* have remained practically as they were put out six months ago." There are large areas in Uganda (British East Africa) containing an abundance of *Landolphia* vines yielding excellent rubber, but as Mr. Mahon regards it "practically impossible to cultivate this plant," the botanical department is experimenting with all the celebrated rubber yielding trees with a view to demonstrating whether that country offers a field for establishing rubber plantations on a commercial basis. He regards it as only a question of the activity of traders to determine how long the natural supplies of rubber (*Landolphia*) will last. He reports the favorable growth of *Hevea*, *Castilloa elastica*, and *Manihot Glaziovii*.

ECUADOR RUBBER AND DEVELOPMENT CO.

[See THE INDIA RUBBER WORLD, December 1, 1902—page 80.]

THE Hon. David Secor, treasurer of this company, who has been recently in Ecuador, cabled home that the purchase had been concluded of important additional rubber properties on which an option had been held, as already reported in these pages. The option had been obtained by other members of the company, subject to approval by Mr. Secor. The company's headquarters are at Winnebago City, Minnesota.

LOS ANDES RUBBER, LUMBER AND FRUIT CO.

[See the INDIA RUBBER WORLD, February 1, 1902—page 142.]

AT a meeting of the newly elected directors, in New Orleans, on May 6, the following officers were elected: Frank A. Daniels, president; E. H. McFall, vice president; T. Duncan, treasurer; George Montgomery, Secretary. The company (incorporated in Louisiana in September, 1901) now hold 500 *manazanas* [=9176 acres] of land under a concession from Guatemala, instead of 200 *manazanas*, as at the beginning The location is 30 miles from Port Barrios. Banana shipments are now being made, and a rubber plantation has been formed.

* * *

THE Tehuantepec Rubber Culture Co. have removed their New York offices from No. 35 Nassau street to No. 81 Wall street.

NEWS OF THE AMERICAN RUBBER TRADE.

GOOD BUSINESS OF THE OKONITE CO., LIMITED.

THE London *Financial Times* pirnts a very favorable report of the second year's business of The Okonite Co., dating from the reorganization, since which time the principal management has been in America. It says: "The profits were sufficient, after allowing for all charges, to pay 6 per cent. on the ordinary shares and to carry forward £18,500, making, with the balance brought forward from 1901, when no dividend was distributed, a total surplus of £27,900. In addition, during the two years, £5900 has been placed in trust for bond redemption, and notes outstanding for borrowed money to the extent of £17,200 have been extinguished. The only obligation for notes now is all against merchandise. The chairman at the meeting in America the other day stated that business had been better than ever so far this year, and that the company has been compelled by expanding orders, to add to its buildings and plant."

EUREKA FIRE HOSE CO. STILL BUILDING.

AN extension is being built to the plant in Jersey City, New Jersey, to afford additional space needed by the twisting and weaving departments. The extension is about 116×50 feet, with four floors, and will make the total area of the company's main brick factory about 3 acres. With the extension, the main building will be 366 feet long and average 90 feet in width, all being four stories in height. The machinery to be installed will be electrically driven and the electric lighting, telephone, and fire alarm systems of the present mill will be extended into the new structure.

BOSTON RUBBER SHOE CO.'S AFFAIRS.

THE latest annual statement of condition, required by law to be filed with the commissioner of corporations of Massachusetts, makes the following showing, as of date April 1, 1903:

ASSETS.		LIABILITIES.	
Real estate—Malden....	$332,400	Capital stock.....$	5,000,000
Malden Last Co.....	27,000	Balance profit and loss..	996,965
Melrose.....	399 125	Debenture bonds	4,800,000
Machinery—Malden ...	229.553	Accrued interest on bonds	
Malden Last Co.....	10,000	and pay-roll not due..	59,290
Melrose.....	125.235		
Cash and debts receivable	2,288,675	Total.... .....$	10,856,256
*Special contract U. S. Rubber Co.....	4,800,000		
Merchandise.....	2,626,837		
Miscellaneous.....	17.430		
Total.....$	10,856,256		

* To pay principal and interest of debenture bonds as they may mature or be drawn.

The holdings of shares are reported as follows: E. S. Converse, 25,740; Industrial Trust Co., trustee, 8400; C. C. Converse, 5562; Mrs. E. M. Chick, 4663; Fred T. Ryder, 2000; H. E. Converse, 1000; Mrs. F. C. Leland, 500; Mrs. M. D. Converse, 500; E. L. Corning, 500; Mrs. M. I. Converse, 500; E. T. Bickford 275; Samuel P. Colt, 200; Mrs. J. L. Bickford, 100; Lester Leland, 60; total, 50,000.

A CHARGE OF FRAUD NOT SUSTAINED.

ON May 6, at New York, occurred a final hearing in the case of one James B. Kellogg, who had been held in $2500 bail on a charge of conspiring to violate the postal laws. One count in the charge connected Kellogg with the use of the mails in promoting The International Wheel, Tire, and Rubber Manufacturing Co. [See THE INDIA RUBBER WORLD, April 1, 1903—page 245]. At the hearing it was testified that the company had been organized in good faith to make tires, for which purpose it had purchased a rubber plant at New Brunswick, New Jersey; that company shares had been offered to the public, but a certain publication in a New York newspaper made investors suspicious, and the sale of shares ceased, leaving the company unable to carry out its plans. The proof offered failed either to show that the enterprise was fraudulent in intent, or to connect Kellogg directly with its affairs, whereupon he was discharged from custody.

DEFUNCT RUBBER CORPORATIONS.

A RECENT proclamation by the governor of New Jersey declares the charters of certain named corporations to be void, on account of their failure to pay the corporation taxes assessed against them in that state for the year 1900. Following are the names of such concerns related to the rubber trade, together with further details in regard to some of them:

American Commercial Rubber Co., Elizabeth, N. J., incorporated February 9, 1899; capital, $250,000; waterproofing cloth for the trade; receiver appointed in April, 1900.

American Rubber Horseshoe Co., incorporated August 16, 1899, by Buffalo (N. Y.) and New Jersey parties; principal office, Jersey City, N. J.; capital, $100,000.

Artificial Rubber Co., Philadelphia, Pa., incorporated February 4, 1899; capital, $1,000,000; manufacture of a substitute for rubber.

Continental Crude Rubber Co.

Enterprise Rubber Co., Trenton, N. J., incorporated August 22, 1899; capital, $25,000; manufacture of heels and soles and mold work.

Insulated Wire Co.

Malachite Rubber Specialty Co.

Mears Rubber Horseshoe Co.

Mutual Rubber Manufacturing Co., Trenton, N. J., incorporated March 23, 1899; capital, $125,000; rubber brokerage, with permission in the charter to engage in manufacturing.

New Jersey Hard Rubber Novelty Co.

Rigby Waterproofing Co., New York city, incorporated in March, 1899; capital, $300,000; waterproofing cloth by the Rigby—an English—process.

Single Tube Tire Co., incorporated late in 1897, by leading American manufacturers, to introduce single tube cycle tires in Europe; business succeeded by The Single Tube Tires, Limited, of London.

Waterbury Rubber Co., New York city, incorporated in 1888; business succeeded by the Waterbury Rubber Manufacturing Co., incorporated by the same parties July 3, 1901; capital, $100,000.

AN ACTION FOR DAMAGES IN CANADA.

IN 1900, Hugh McCaugherty, aged 17, while at work at a calender, keeping the rollers clean, in the factory of the Gutta-Percha and Rubber Manufacturing Co. of Toronto, Limited, sustained the loss of all his fingers, and later sued the company for $10,000 damages and $2000 for doctors' bills. The trial was before a jury, under the common law in relation to negligence of employers, a verdict resulting on September 30, 1901. The jury found that the machine was a dangerous one, and that the accident was due to defective condition or arrangement of the works, in that the calender rolls were not provided with guards; that the defendants had not used reasonable care to protect their employé, and that the plaintiff by the exercise of ordinary care could not have avoided the accident. The only expert witness introduced by the plaintiff was a machinist without experience in a rubber mill, whereas the defendant offered the testimony of the builders of the calender and of several experienced rubber factory managers to the effect that the calender was of the usual kind, that guards for the rollers were never used, and were not necessary and would interfere with the working of the machine. Damages were awarded in the sum of $2000, against which verdict the company appealed.

In the higher court, although the practice is not to question the findings of facts in a trial court, the treatment by the jury of the expert evidence in this case was strongly criticised. The decision stated that, in view of the testimony offered, which proved the machinery to have been one of reasonable safety, the case had not been one for a jury. The court of appeal held, however, that the defendants had been negligent in not providing a better seat for the lad while at work, and awarded damages under the "workmen's compensation act," allowing the maximum limit under that act, $1500.

The company would have preferred to settle the case out of court, but a trial was insisted upon by the accident insurance company liable for the damages. The interest of the matter to the trade in Canada is that this case marks another step toward getting this class of suits tried under the "workmen's compensation act," instead of under the common law, where no limit of liability is fixed. Another point is that without the appeal a precedent would have been established of damages allowed on account of the absence of guards from the calender rolls, to be quoted in all future similar cases.

RUBBER FOOTWEAR FOR THE POOR INDIANS.

THE Edwards-Stanwood Shoe Co. (Chicago) on April 29 were awarded a contract, by the government bureau of Indian affairs, for the following quantity of rubber footwear for the use of the Indians under the care of the government, for the ensuing year:

796	pairs men's boots.	387	pairs boys' overshoes.
2409	" boys' arctics.	495	" misses' overshoes.
1250	" misses' arctics.	1579	" women's overshoes.
1883	" women's arctics.	215	" men's overshoes.
1297	" men's arctics.		

THE MERCHANTS' RUBBER CO., LIMITED.

THIS is a new manufacturing concern, located at Berlin, Ontario, formed to engage in the production of rubber boots and shoes. The capital is $100,000 and it is planned to begin manufacturing by November 1. The president of the new company is Jacob Kaufman, who retired recently from the same office in The Berlin Rubber Manufacturing Co., Limited, and the manager is T. H. Rieder, who since 1899 has been in the employ of the Berlin company.

BAUMANN RUBBER CO. (NEW HAVEN, CONN.)

THIS company have recently made extensive additions to their buildings and mechanical equipment, the new structure have a total length of 100 feet, parts of it being one, two, and three stories high, respectively. The company are producing some good selling novelties in rubber toys and have built up a good trade in air balloons.

THE MATTSON COMPANY'S NEW LINES.

THE Mattson Rubber Co. (New York), who for some time past have confined themselves very largely to the manufacture of dress shields and dress shield materials, have added to their line quite extensively, and are now manufacturing all kinds of stamp rubber, particularly sponge backing, and hat manufacturers' supplies in rubber, and a full line of erasive rubbers covering many patented novelties. They are also doing quite a business in general mold work, and in mixing and calendering for the trade.

PROVED BELTING.

A HALF century's constant use in thousands of the leading factories of the United States has proved the very great worth of "Royal Worcester" belts. The Graton & Knight Manufacturing Co. are to be congratulated on the splendid reputation that their belting has secured by its honest work all through this long period of time. Manufacturers who are interested in securing good belting are invited to write for prices and facts about "Royal Worcester," to Worcester, Massachusetts.

HOOD RUBBER CO.—INCREASE OF CAPITAL.

AT a meeting of the shareholders in Boston, on May 21, it was voted to increase the capital stock of the company from $900,000 to $1,000,000. Subsequently the directors declared a stock dividend of $11.12 per share, representing part of the profits of the company since the closing of the books Novem- 1, 1902.

INTERNATIONAL A. AND V. TIRE CO.

ADELBERT H. ALDEN having retired from the presidency of this company, that position has been filled by the election to that office of Harrison C. Williams, formerly general manager, while J. C. Matlock, lately in charge of sales, has become general manager.

NEW YORK STOCK EXCHANGE QUOTATIONS.

UNITED States Rubber Co.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Apr. 25	430	15⅝	15	1 540	51	50
Week ending May 2	750	15¼	14½	635	50¼	50
Week ending May 9	1,968	16¼	15¼	1,530	52½	50¾
Week ending May 16	2.620	17	15½	3,420	54	51½
Week ending May 23	2,630	15¾	14½	1,117	52	50

RUBBER Goods Manufacturing Co.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High	Low.
Week ending Apr. 25	4,950	26⅜	25	1,080	82	79
Week ending May 2	2,500	26¼	25	550	80½	80
Week ending May 9	1,300	26	25¾	810	81¼	80¼
Week ending May 16	2,500	26	24⅜	625	81	80
Week ending May 23	6,300	25	23½	610	80½	79

ATLANTIC RUBBER SHOE CO.

THE Atlantic Rubber Shoe Co., have bought a tract of land in the town of Cranston, which is really part of the city of Providence, Rhode Island. The parcel of land consists of some eight acres, close to the Pawtuxet river, and on the line of the New York, New Haven and Hartford railroad. It is rumored that a large factory will be erected at once. Speaking of rumors, it was also said that Superintendent Maurice C. Clark, of ths Joseph Banigan Rubber Co., had tendered his resignation, to take the superintendency of the Atlantic Rubber Shoe Co. Mr. Clark, however, denies the latter, but acknowledges that he did tender his resignation as he desired to withdraw from active business, but that the Banigan company did not see their way clear to release him.

ANOTHER ALLING RUBBER STORE.

THE Alling Rubber Co. (New Haven, Connecticut), will increase their paid in capital stock from $18,000 to $24,000, for the purpose of opening a rubber store at Meriden, Connecticut, which will be ready for business about June 3. Franklin B. Alling will be the resident manager at Meriden. This will make the sixth store in Connecticut owned and conducted by the Alling interest. Some details regarding the other stores appeared in THE INDIA RUBBER WORLD of April 1 (page 242). The Alling Rubber Co. report: "All our stores report a very heavy garden hose trade. We think this will be the best hose season we have had in Connecticut in ten years."

NEW INCORPORATIONS.

THE Williams Rubber Co. (Los Angeles, California), April 22, 1903, under California laws; capital, $25,000. T. J. Williams, president; W. G. Williams, secretary and treasurer; H.

O. Harrison, sales manager. The secretary advises THE INDIA RUBBER WORLD: "The object of this company is to manufacture and sell rubber goods, especially selling rubber tires and other rubber goods in that line."

=Laurel Rubber Co. (Passaic, N. J.), April 23, 1903, under New Jersey laws, to manufacture rubber goods; capital, $10,000. Incorporators: Morris Rosenthal and Charles A. Brandt, Passaic, N. J., and Frank A. Cigel, Paterson, N. J.

=Marion Insulated Wire and Rubber Co. (Marion, Indiana), April 30, 1903, under Indiana laws; capital, $100,000, fully paid in. Officers: J. L. Barley, president; C. A. Michaels, vice president; Hiram Beshore, treasurer; R. E. Lucas, secretary and general manager. Mr. Lucas for the last eight years has been secretary of the Indiana Rubber and Insulated Wire Co., at Jonesboro, and will be the practical man of the new company. A factory site has been located, between the two railways running through Marion and near their freight houses; work has been begun on the factory buildings, the main structure to be 232 × 90 feet, three stories high, standard mill construction. Electric power probably will be used.

=American Rubber Co., May 13, 1903, under New Jersey laws; capital $100,000. Incorporators: Samuel R. Betts, James J. Cosgrove, K. K. McLaren. Samuel R. Betts is a member of the law firm of Betts, Betts, Sheffield & Betts, No. 120 Broadway, New York, where THE INDIA RUBBER WORLD was informed: "We have no information to give out at present concerning this company." Mr. Cosgrove is a lawyer at the same address. Mr. McLaren is secretary of the Corporation Trust Co., No. 15 Exchange place Jersey City, which is mentioned as the principal office of the company.

=Springfield Tire and Rubber Co. (Springfield, Ohio), April 17, 1903, under West Virginia laws, to manufacture rubber tires, horseshoe pads, mold work, etc.; capital, $75,000. Incorporators: H. L. Slager, W. H. Smith, Oscar W. Smith, Eugene Garnier, and Oscar Garnier, all of Springfield. Henry A. Middleton is manager.

=Star Rubber Co., May 18, 1903, under New York laws, to manufacture rubber tires; capital, $50,000. Incorporators: John B. Summerfield, Alfred T. Davison, Henry M. Haviland —all of New York city.

=Seaboard Rubber Co. (New York city), May 6, 1903, under New York laws; capital, $1000. Directors: Robert H. Ernst and George H. Quenard, New York, and J. H. Baird, Newark, New Jersey.

MILWAUKEE RUBBER WORKS CO.—FACTORY COMPLETED.

THE Milwaukee Rubber Works Co. announce the completion of their factory, located at Cudahy, near Milwaukee, Wisconsin. They have broken all records in the prompt erection and completion of a factory of its kind in the industry. The main building is of brick, 200 × 45 feet, two stories, with a projecting wing 185 × 45 feet. The upper floor of the main building will be used for making up of bicycle and automobile tires and sundries. The lower floor will be used for the engine and boilers, and heavy machinery for milling rubber. The wing will be used for vulcanizing and general press work. The plan calls for two more wings of the same dimensions, to be added as soon as material can be secured. The company anticipate a thriving business and already have enough business in sight to fill their day capacity. They will make the solid vehicle tire and pneumatic automobile and bicycle tires their leading business, although they are equipped to make a large line of general mechanical goods, such as hose, packing, valves, mats, hoof pads, and other press work of like nature. Much in their favor are the old and experienced men connected with them. Each department is thoroughly equipped with modern machinery and only the best skilled workmen are employed. The organization consists of the best business men in Milwaukee and, as the active parties in the company are well experienced, the success of the company is assured.

TRADE NEWS NOTES.

THE closing of the factory of the Concord Rubber Co. (Concord Junction, Mass.) has been followed by the departure from that locality of most of the rubber workers, some of whom have entered the Apsley rubber factory, while others have returned to Malden, whence they came to Concord.

=One of the best illustrations of what can be done in the way of window decoration with fine rubber goods may be seen at the new store of the Hodgman Rubber Co., Nos. 806 808 Broadway, New York. The windows are very far from being the ordinary rubber store windows, as there is no crowding—but few goods are shown—the whole exhibit being marked by simplicity and elegance.

=Edward G. Milbury has been appointed permanent receiver of the Edward G. Milbury Co., wholesale dealers in oil clothing and rubber clothing, No. 38 Walker street, New York, in proceedings for voluntary dissolution. He was appointed temporary receiver September 9, 1902, when the liabilities were $12,064, and the nominal assets $15,242.

=Jacob Hammer, for eight years past connected with the St. Paul Rubber Co., an important jobbing house of St. Paul, Minnesota, has resigned as secretary and treasurer and retired from the company, on account of ill health. H. M. Hodgman, who founded the business some 26 years ago, and has since remained connected with it, has been elected secretary, and John E. Fowler, who has been with the house for eight years, becomes treasurer. Albert Fischer continues as president. This was the first rubber house opened west of Milwaukee.

=The partnership agreement of William T. Bonner and F. W. Gregory, doing business as the Bonner Manufacturing Co., makers of rubber substitutes, No. 89 State street, Boston, terminated on March 30. The business will be continued under the same name, with W. T. Bonner and Charles S. Wing as copartners, and with Mr. Bonner as the active business manager.

=Referring to a mention of the Purete Rubber Co. (Menlo Park, N. J.), in the last INDIA RUBBER WORLD, it should be noted that, since its publication, the company state that they will not make golf balls, as was at first intended.

=The Thread City Collar Co. (Willimantic, Connecticut) deny a report that they intend closing. Their principal business is in rubber collars, the trade in which is reported good, but recently linen collars were added, and it is these the production of which is temporarily suspended.

=A dividend of 1 per cent. on the common stock of the American Chicle Co. was payable on May 11, being the customary monthly disbursement.

=On May 4 Alexander MacPherson, who since 1898 had been manager for the Toronto branch of the Canadian Rubber Co. of Montreal, assumed charge of the mechanical goods department of the company at Montreal. Before leaving Toronto, a farewell dinner was tendered him by the Wholesale Shoe Association of that city.

=P. T. Betts, crude rubber broker, has removed his office from No. 38 to No. 43 Murray street, New York.

=The Pequanoc Rubber Co. (Butler, New Jersey) report a constantly increasing business, due to the good reputation which has been built by the enterprising managers for their reclaimed rubber product.

=The incorporation is reported, under California laws, at Oakland, in that state, of the Morck Elastic Tire Co., with $200,000 capital.

=The Stoughton Rubber Co. (Boston, Massachusetts) have given up their retail store at No. 24 Summer street and have moved to No. 232 Summer street, the heart of the wholesale district, where they have fitted up fine headquarters.

=A gorgeous poster in many colors and full of life and spirit has been brought out by the Peerless Rubber Manufacturing Co. (New York). It represents a "Free For All Handicap" horse race, and a 100 yard dash human race. In fact it is very racy, and beyond that is well worth sending for. The *motif* of the picture, by the way, has to do with rubber packing.

=The machinery, stock, patents, etc., of the Munger Automobile Tire Co. (Trenton, New Jersey) which lately went into the hands of a receiver, have been sold at auction, the whole outfit bringing $2400. A dealer in second-hand machinery from Philadelphia was the purchaser.

=The factory of the Seamless Rubber Co. (New Haven, Connecticut) has been idle since the middle of May. At that time the general superintendent, James A. Murray, stated that the employés had been laid off because the factory was short of coal, and that coal could not be secured on account of the teamsters' strike.

=The Maynard Shoe Co. (Claremont, New Hampshire), who for some time past have done an extensive business in rubber soled canvas shoes, will put in plant for the extensive manufacture of tennis shoes. It is reported that Joseph W. Elberson, so long identified with the rubber industry at Setauket, Long Island, will have charge of this department.

=The Kokomo Rubber Co. (Kokomo, Indiana) have not departed from their annual rule of adding to their plant. This year, however, the addition is greater than ever, comprising a large brick building and a duplication of the whole of their rubber machinery, engines, and boilers.

CONSOLIDATED RUBBER TIRE CO.

AT the annual meeting of the stockholders, at Jersey City, New Jersey, on May 4, the directors were reëlected, as follows: Isaac L. Rice, Emerson McMillin, Stephen Peabody, Martin Maloney, Frederick A. Seaman, Van H. Cartmell, and Russell H. Landale. Samuel W. Ehrich, a director elected in 1902, had retired during the year, being succeeded at the time by Mr. Landale, a lawyer of No. 170 Broadway, New York, supposed to represent interests of Talbot J. Taylor & Co. Mr. Cartmell was reëlected president and Mr. Seaman secretary and treasurer. No financial statement was made public.

PERSONAL MENTION.

COLONEL HARRY E. CONVERSE, of the Boston Rubber Shoe Co. entertained a number of guests at a "housewarming," on the evening of May 8, when his new summer residence, "The Moorings," at Marion, Massachusetts, was thrown open for the first time. Colonel Converse purchased an estate of 65 acres there in 1898, and last year had plans prepared for what proves to be the finest residence on Buzzard's Bay.

=Mr. William W. Small, of Newark, New Jersey, who was in the Acre territory during the whole of the disturbances there which began in August last, returning home only after navigation to the seaboard was reopened, started for Bolivia again on May 6, with a view to perfecting titles to rubber lands in which he is interested, together with some friends in the rubber trade in this country.

=Mr. Max Loewenthal, treasurer of the U. S. Rubber Reclaiming Works (New York), has gone to Europe for a four months' vacation.

=Mr. Joseph F. McLean, president of the Pequanoc Rubber Co. (Butler, New Jersey) was reappointed treasurer of the County of Morris, New Jersey, by a unanimous vote of both the Democratic and Republican freeholders of that county, at their annual meeting on May 13, and on the same day filed his bond for $100,000, which was promptly accepted. In politics Mr. McLean is a Republican, but the compliment implied in the unanimous vote given to him shows that his friends are numbered in both parties.

=Mr. William T. Baird, president of the Rubber Trading Co. (New York), accompanied by Mrs. Baird, sailed on May 9 for a two months' absence in Europe, intending to touch first at Gibraltar.

=Mr. Elmer E. Bainbridge, who represents the Lake Shore Rubber Co. (Erie, Pa.), was a recent caller at the New York office of THE INDIA RUBBER WORLD.

=Mr. Charles W. Barnes, who has charge of the American line of rubber footwear at the Boston office of the United States Rubber Co., was married on April 29 to Miss Mary S. Piper, for several years one of the most capable of the stenographic staff of the company. The newly married pair visited Old Point Comfort on their wedding journey.

=Mr. Otto Meyer, of Boston, well known in crude rubber circles, was recently united in marriage to Miss Irma E. Neil, of the same city.

A WEDDING IN THE GOODYEAR FAMILY.

ON May 27, at the Church of the Holy Trinity, on Lenox avenue, New York, was celebrated the marriage of Miss Katherine Francis Goodyear, daughter of Professor William Henry Goodyear, to her cousin, Mr. Nelson Goodyear, third and youngest son of the late Charles Goodyear, Jr. Charles Goodyear, the inventor, was survived by two sons, whose names appear above. The elder, Charles, who assisted in the affairs of his father and was the executor of his will, died in 1896. The other son, William Henry, is curator of the museum of fine arts of the Brooklyn Institute and a writer and lecturer of note on architectural topics. Nelson Goodyear, the bridegroom, studied architecture in Paris, and besides at Flushing, New York.

OBITUARY.

CHARLES S. SANXAY, second vice president of the New York Rubber Co., died on April 28 at his home in Brooklyn, of heart failure, after three weeks' illness. He was a son of the late Skeffington S. Sanxay, and was born in Brooklyn (New York) on January 16, 1863. He left school early, bent upon a mercantile career, though it was desired by his father that he should follow the latter's profession, that of the law. He entered the office of the New York Rubber Co. at the age of 15, and from that time his whole life and ambition were devoted to the interests of that company, of which he became second vice president in 1901. Mr. Sanxay was a man of genial and sociable disposition, and easily made and retained friends. He was a member of the Brooklyn Club, the Marine and Field Club, and several other organizations. He leaves two daughters and a mother and brother to mourn his early death.

=The funeral of the late Charles A. Hoyt, a director in the American Hard Rubber Co., whose death in California was reported in the last INDIA RUBBER WORLD, took place on May 4, at St. Mary's Cathedral, Burlington, Vermont, which was Mr. Hoyt's native town.

=Henry A. Lozier, formerly president of the Cleveland Bicycle Co., and an important factor in the bicycle trade, up to the time of the merger of his interests in the American Bicycle Co., died in New York on May 25. Mr. Lozier's business calling for a great many tires, he had a special quality made, which he branded the "Cleveland." He was 66 years of age and left a fortune.

ADDITIONAL NEWS NOTES.

THE Diamond Rubber Co. have removed their headquarters in Chicago to Nos. 167-69 Lake street, where a combined mechanical and tire branch has been established. Their tire repair shop, however, remains as formerly, at No. 431 Wabash avenue.

=The Atlantic Rubber Shoe Co. have moved their New York office from No. 127 Duane street to Nos. 52-24 William street.

=The O'Sullivan Rubber Co. (Lowell, Massachusetts) will distribute 1,000,000 copies of a new "ragtime" song, "Then Say O'Sullivan's," the words of which tell the story of heels which "bring you next to angels' wings."

=A new belt press is being installed at factory of the National India Rubber Co. (Bristol, Rhode Island.)

=The new Kleinfontein mines, South Africa, are to be equipped with an extensive conveyor plant, supplied by the Robins Conveying Belt Co. (New York). The plant will be operated by British electric motors.

=The Republic Development Co. (New York), engaged in developing the plantation of the Obispo Rubber Plantation Co., have removed their offices from No. 52 Broadway to No. 15 William street.

=The Carmin Rubber Co., No. 1857 Notre Dame street, Montreal, are a new company manufacturing water proof garments.

=The Manila end of the Commercial Pacific cable having been successfully landed, the cable ship *Anglia* left that port on May 25 to lay the cable to the island of Guam. It was estimated that the trip would occupy eight days.

REVIEW OF THE CRUDE RUBBER MARKET.

THE month closes with lower prices on most grades of Pará rubber, a decline in several African sorts, but without change in Centrals. The records kept at Pará indicate a shortage as compared with last year's crop, the showing month by month being given in the table below. The arrivals already, however, are larger than in any full crop year prior to 1901-02:

	1900-01.	1901-02.	1902-03.	This year's Crop.
To July 31	860	1,260	1,290	30 more
To August 31	2,150	2 550	2,660	110 "
To September 30	3,430	4,490	4.330	160 less
To October 31	5,780	7,130	6,610	520 "
To November 30	7,980	10,100	9,260	840 "
To December 31	11,300	13.630	12,250	1,380 "
To January 31	13,740	17,490	14,740	2,750 "
To February 28	17,030	20,870	19,500	1,370 "
To March 31	21,820	24 530	23,540	990 "
To April 30	24,350	26,670	26,020	650 "
To May 31	26,924	28,750	*27,790	*760 "
To June 30	27,610	30,000		

[* To May 26, 1903.]

New York quotations on May 28 were:

PARÁ.		CENTRALS.	
Islands, fine, new	87 @88	Esmeralda, sausage	68 @69
Islands, fine, old	91 @92	Guayaquil, strip	62 @63
Upriver, fine, new	91 @92	Nicaragua, scrap	67 @68
Upriver, fine, old	97 @98	Panama, slab	55 @56
Islands, coarse, new	56 @57	Mexican, scrap	67 @68
Islands, coarse, old	@	Mexican, slab	55 @56
Upriver, coarse, new	72 @73	Mangabeira, sheet	52 @53
Upriver, coarse, old	@		
Caucho (Peruvian) sheet	57 @58	EAST INDIAN.	
Caucho (Peruvian) ball	68 @69	Assam	82@83
AFRICAN.		Borneo	@
Sierra Leone, 1st quality	82 @83	GUTTA-PERCHA.	
Massai, red	82 @83	Prime, red	@2 25
Benguella	69 @70	Prime, white	@1.50
Cameroon ball	61 @62	Lower grades	75 @1.25
Gaboon flake	40 @41	Reboiled, prime	75 @ .90
Gaboon lump	43 @44	Reboiled, inferior	10 @ .25
Niger paste	20 @21		
Accra flake	20 @21	Balata, sheet	63 @65
Accra buttons	58 @59	Balata, block	52 @55
Accra strips	60 @61	Pontianak (in quantities)	@ 3⅛
Lopori ball, prime	82 @83	Almeidina	@ 8
Lopori strip, do	79 @80	Tuno gum	@12
Ikelemba	82 @83	Chicle	@42
Madagascar, pinky	79 @80		

Late Pará cables quote:

	Per Kilo.		Per Kilo
Islands, fine	5$300	Upriver, fine	6$400
Islands, coarse	2$500	Upriver, coarse	4$700

Exchange, 12 1/32 d.

Last Manáos advices:

Upriver, fine	6$000	Upriver, coarse	4$100

Exchange, 12 3/32 d.

NEW YORK RUBBER PRICES FOR APRIL (NEW RUBBER).

	1903.	1902	1901.
Upriver, fine	91@93	73@74½	85 @94
Upriver, coarse	72@74	59@60	59 @68
Islands, fine	87@91	71@73	84 @93
Islands, coarse	56@60	47@49	52 @60
Cametá, coarse	61@63	53@53½	54 @63

Statistics of Para Rubber (Excluding Caucho).

NEW YORK.

	Fine and Medium.	Coarse.	Total 1903.	Total 1902.	Total 1901.
Stocks, March 31 *tons*	497	42 =	539	505	929
Arrivals, April	1067	427 =	1494	1483	2141
Aggregating	1564	469 =	2033	1988	3070
Deliveries, April	1073	405 =	1478	1496	2076
Stocks, April 30	491	64 =	555	492	994

	PARÁ.			ENGLAND.		
	1903.	1902.	1901.	1903.	1902.	1901
Stocks, March 31 *tons*	255	560	485	1550	1825	1346
Arrivals, April	2510	2655	1980	1087	2145	904
Aggregating	2765	3215	2465	2637	3970	2250
Deliveries, April	2615	975	2295	962	3800	825
Stocks, April 30	150	2240	170	1675	170	1425

	1903.	1902.	1901.
World's supply, April 30 *tons*	3691	4196	3885
Pará receipts, July 1 to April 30	23,756	23.599	21,746
Pará receipts of Caucho, same dates	3104	2736	1604
Afloat from Pará to United States, April 30	731	674	861
Afloat from Pará to Europe, April 30	580	620	435

In regard to the financial situation, Albert B. Beers (broker in India-rubber, No. 58 William street, New York), advises us:

"Although during May call rates for money have been quite easy, there has been only a very moderate demand for paper and rates have held firm, being 5½ @ 6 per cent. for the general run of rubber paper."

Rubber Scrap Prices.

NEW YORK quotations—prices paid by consumers for carload lots—are slightly lower, as follows:

Old Rubber Boots and Shoes—Domestic	7⅛ @ 7¼
Do —Foreign	6⅛ @ 6¼
Pneumatic Bicycle Tires	5 @ 5¼
Solid Rubber Wagon and Carriage Tires	6½
White Trimmed Rubber	9¼ @ 9½
Heavy Black Rubber	4¼
Air Brake Hose	2⅝ @ 3
Fire and Large Hose	2½
Garden Hose	1½
Matting	1

Antwerp.

AT the inscription on May 26 the offerings comprised about 477 tons, the most of which was sold at slight advances over estimations. The principal offerings, with broker's valuations, were:

13 tons	Lake Leopold II	*francs*	9.50
20 "	Upper Congo—Uelé		9.20
22 "	Upper Congo—Aruwimi		8.50
20 "	Upper Congo—ordinary		9.25
23 "	Upper Congo—Mongalla		9.
11 "	Kassai red		9.25
16 "	Kassai black		9 40
13 "	Upper Congo—Lopori I		9.65
10 "	Upper Congo—Lopori II		8.50
20 "	Lake Leopold II		8.50
25 "	Upper Congo Aruwimi		8.75

ANTWERP RUBBER STATISTICS FOR APRIL.

DETAILS.	1903.	1902.	1901.	1900.	1899.
Stocks, Mar. 31. *kilos*	271,884	841,678	843,834	735,060	253.569
Arrivals in April	605,743	307,834	613.368	507,911	447.919
Congo sorts	556,542	261,739	548,563	423.274	402,319
Other sorts	49,201	46,095	64,805	84,637	45,600
Aggregating	877,627	1,149,512	1,457,202	1,242,971	701,488
Sales in April	388,828	648,848	643,384	421,151	180,185
Stocks, Apr. 30	488.799	500,664	813,818	821,820	521,303
Arrivals since Jan 1.	1,751,871	1,809,323	2,186,678	2,284,225	1,209,864
Congo sorts	1,565,539	1,698,426	1,951,856	1,899,270	1,049,552
Other sorts	186,332	110,897	234,822	384,955	160,312
Sales since Jan. 1	1,921,177	1,723,368	1,986,899	1,754,396	951,901

RUBBER ARRIVALS AT ANTWERP.

APRIL 23.—By the *Albertville*, from the Congo:

Bunge & Co.	(Société Générale Africaine) *kilos*	187,000	
Do	(Société Anversoise)	8,200	
Do	(Société Isangi)	4,300	
Do	(Comite Spécial Katanga)	1,600	
Do	(Chemins de fer des Grand Lacs)	9,300	
Do	(Cie. du Kasai)	39,300	
Do		500	
Do	(Sultanats du Haut Ubangi)	5,500	
Société A B I R		28,900	
Comptoir Commercial Congolais		11,300	
Société Coloniale Anversoise	(Cie. de Lomami)	2,000	
Do		500	
Evrard Havenith	(Société Andrea)	1,400	299,800

MAY 14.—By the *Anversville*, from the Congo:

Bunge & Co.	(Société Générale Africaine) *kilos*	96,800	
Do	(Société Anversoise)	66,800	
Do	(Cie. du Kasai)	36,400	
Société A B I R		115,600	
M. S. Cols	(Société L'Ikelemba)	900	
Charles Dethier	(Société Belgika)	1,700	
Comptoir des Produits Coloniaux.	(Cie. de la N'Goko)	3,300	
Do	(Cie. des Produits de la Sangha)	1,200	
Société Coloniale Anversoise.	(Belge du Haut Congo)	29,500	
Do	(Cie. de Lomami)	25,700	
Do	(Süd Kamerun)	4,800	382,700

Rubber Receipts at Manaos.

DURING April and for the first ten months of the crop season [by courtesy of Messrs. Witt & Co.]:

FROM—	APRIL. 1903.	1902.	1901.	JULY-APRIL. 1903.	1902.	1901
Rio Purús *tons*	452	399	364	5492	6313	5640
Rio Madeira	86	115	145	2160	2694	2487
Rio Juruá	238	257	91	3393	3451	2821
Rio Javary—Iquitos	58	3	78	1473	1213	1231
Rio Solimões	37	58	40	1305	1508	1122
Rio Negro	96	39	73	635	356	470
Total	967	871	791	14458	15535	13771
Caucho	619	394	520	2758	2787	2876
Total	1586	1265	1311	17216	18322	16647

Manaos Rubber Statistics.

THE following statistics of the arrivals of rubber at Manáos from all sources, during the calendar year 1902, are supplied by the Associação Commercial do Amazonas—all in kilograms:

FROM—	Fine.	Medium.	Coarse.	Caucho.	Total.
Amazonas state	9,590,744	1,370	1,820,688½	2,185,173=	13,597,975½
Mattogrosso	127,462	....	15,097	80=	142,639
Venezuela	48,254	....	19,240	....=	67,494
Peru	162,451	216	27,381	24,704=	214,752
Bolivia	2,461,067	....	346,470½	42,120=	2,849,657½
Total entries.	12,389,978	1,586	2,228,877	2,252,077=	16,872,518

SOURCES OF RUBBER PRODUCTION IN AMAZONAS.

	Fine.	Medium.	Coarse.	Caucho.	Total.
Rio Purus	3,591,586	....	576,206	794,611=	4,962,403
Rio Juruá	2,420,825½	924	441,125	1,179,118=	4,041,992½
Rio Madeira	1,558,417½	4	263,853½	155,719=	1,977,994
Rio Solimoes	761,912	20	179,107	10,742=	951,781
Rio Javary	636,976	207	123,588½	28,383=	789,154½
Rio Negro	326,135½	215	100,208	.... =	426,558½
Rio Jutahy	103,089	....	24,252	6,398=	133,739
Rio Içá	64,967	....	15,017	3,862=	83,846
Rio Japurá	64,322	..	8,534	3,076=	75,932
Baixo Amazon's	54,253½	....	86,160½	22=	140,436
Rio Branco	8,260	....	2,637	3,240=	14,139
Total	9,590,744	1,370	1,820,688½	2,185,173=	13 597,975½

It will be noted how small is the proportion of medium (*entrefine*) rubber in the arrivals. The proportion becomes much larger, however, after the classification at Manáos, as will appear from the following details of rubber exports from Manáos during the year:

RUBBER PRODUCED IN AMAZONAS.

To—	Fine.	Medium.	Coarse.	Caucho.	Total.
New York	3,026,178	952,309	951,271	1,020,944=	6,550,702
Liverpool	3,104,827	699,146	582,573	976,501=	5,363,047
Havre	359.566	157,533	122,835	231,608=	871,542
Pará	303,649	....	49,062	5,417=	358,128
Hamburg	64,556	11,484	16,760	680=	93,480
Genoa	21,403	3,060	1,454	.... =	25,917
Total exp'ts.	7,480,179	1,823 532	1,723.955	2,235,150=	13.262,816

TOTAL EXPORTS, INCLUDING TRANSIT RUBBER.

To—	Fine.	Medium	Coarse.	Caucho.	Total.
New York	3,783,973	586,266	1,011,575	1,049,712=	6,831,526
Liverpool	3,259,192	722,148	624,431	978,752=	5,584,523
Havre	413,526	183,089	129,084	231,608=	957,307
Pará*	2,383.171	152	331,180½	37,809=	2,752,312½
Hamburg	77,745	13,266	18,476	680=	110,167
Genoa	21,403	3,060	1,454	.... =	25.917
Total	9,939,010	1,907,981	2,116,20½	2,298,561=	16,261,752½

[* Largely rubber from Bolivia, consigned to Pará.]

These figures do not embrace rubber shipped direct from Iquitos, from which source 1,410,961 kilograms passed Pará during the calendar year 1902. Nor do they include certain shipments of rubber produced in the state of Amazonas below Manàos, and going to Pará or direct to Europe, the whole amounting to 44,523 kilograms.

Statistics are not available of the exports of rubber from Pará, exclusive of what was received from up the river, but a combined statement for Pará and Manáos makes this showing:

Pará and Manáos stocks, December 31, 1901 *kilos*	1,313.000
Combined receipts	28,328,780
Aggregating	29,641,780
Combined exports	28,549,780
Stocks December 31, 1902	1,092,000

If there be subtracted from these exports the total figures for the movement through Manáos, including the direct shipments from Iquitos, and the small amounts from Amazonas ports below Manáos, there remains 10,832,542½ kilograms to be regarded as the produce of the state of Pará.

London.

EDWARD TILL & Co., report stocks May 1:

		1903.	1902.	1901
		tons	—	—
LONDON	Pará sorts			
	Borneo	13	126	172
	Assam and Rangoon	4	35	38
	Other sorts	192	458	631
	Total	209	619	841
LIVERPOOL	Pará	1681	2245	1440
	Other sorts	649	924	1316
	Total, United Kingdom	2539	3788	3597
	Total, April 1	2525	3326	3522
	Total, March 1	1939	3078	2989
	Total, February 1	1921	2674	3129
	Total January 1	1582	2794	2901

PRICES PAID IN APRIL.

	1903.	1902.	1901.
Pará fine, hard	3/ 9⅛@3/10¾	3/- @3/1⅛	3/7 @3/11
Do soft	3/10 @3/10¾	3/0½@3/1⅛	
Negroheads, scrappy	3/ 0⅛@3/ 1⅛	2/6 @2/6¾	2/6¼@2/ 9
Do Islands	2/ 4⅛@2/ 5½	2/-	2/1 @2/ 3⅛
Bolivian	No sales.	3/2	No sales.

S. FIGGIS & Co. report [May 15] a quieter market, with more sellers than buyers. Fine Pará hard spot 3*s.* 10¾*d.*; forward ½*d.* more. Ten tons year old hard fine sold 4*s.* ¾*d.*; 10 tons eighteen months old soft fine sold 4*s.* ¼*d.* Negroheads quiet; small sales scrappy at 3*s.* 1¾*d.* Islands scarce. Cametá sold at 2*s.* 8*d.* Peruvian easier, sellers ball 3*s.* 1*d.*; slab 2*s.* 5¼*d.* At to-days auction, active competition at good prices. Columbian clean white sheet and slab a little soft, 3*s.* ¼*d.*@ 3*s.* ½*d*; rough scrap and sheet part heated, 2*s.* 8¼*d.*@2*s.* 10¼*d.* Central American in good demand; good clean scrap 3*s.* 1¾*d.*; good clean pressed scrap, 2*s.* 7½*d* Madagascar much wanted; dark coated, rather dirty, part soft, 2*s.* 4¼*d.*; niggers, fair rather sandy, 2*s.* 4*d.*@ 2*s.* 4½*d.* Mozambique reddish ball, 3*s.* 5½*d.* Uganda gummy ball, 2*s.* 5*d.* Nyassaland: 740 bags sold; fair to good reddish ball, 3*s.* 2*d.* @ 3*s.* 4½*d.* ditto softish and heated, 3*s.* 4½*d.*; reddish ball, a little mixed, 3*s.* 2*d.* @ 3*s.* 4½*d.* Soudan sausage, 3*s.* 2*d.*

Ceylon Rubber.—Sales May 1 auction, 10 packages: Fine thin biscuits, 4*s.* 3*d.*; pale scrap, 3*s.* 6*d.* Sales May 15 auction, 8 packages: Fine thin biscuits, 4*s.* 2½*d.* @ 4*s.* 3½*d.*; good reddish scrappy ball 3*s.* 3¾*d.*

Liverpool.

EDMUND SCHLÜTER & Co. report Liverpool stocks:

	Mch. 31.	Apr. 30.			Mch. 31.	Apr. 30.	
Pará—1st hands	903	1041	tons.	Peruvians	294	249	tons.
Fine	688	842	"	Africans	387	351	"
Medium	107	117	"	Mollendo	79	70	pkg.
Negroheads	108	82	"	Mangabeira	3	8	"
Pará—2d hands	645	640	"	Pernambuco	40	85	"
Fine	557	563	"	Maniçoba	448	222	"
Medium	28	38	"	Ceará	215	97	"
Negroheads	60	39	"	Assore	60	55	"
Total Pará	1548	1681	"				

THE hearing in the matter of Kramrisch & Co., India-rubber merchants, before the Liverpool court of bankruptcy, referred to in the last INDIA RUBBER WORLD, was continued subsequently on April 28 and May 6, and again adjourned to May 28. The proceedings thus far have made public very little information regarding the state of the accounts of the bankrupt firm. On May 5 Solomon Kramrisch was placed under arrest on a charge of converting to his own use certain rubber belonging to Kleinwort & Co., bankers, and admitted to bail in the sum of £2000.

——The failure of Kramrisch & Co. has involved in litigation several of their customers. The Dunlop Rubber Co. bought rubber from the firm, advances upon which had been made by Brandt & Co., bankers, with the understanding that payment for the rubber when sold should be made to the latter. Through an oversight, the Dunlop company made a deposit to cover the rubber with Messrs. Kramrisch's regular bankers, Kleinwort & Co., and supposed the matter settled. After the failure of the Kramrisch firm, Brandt & Co. brought suit against the Dunlop Rubber Co. for £3263 14*s.* and recovered. The Continental Caoutchouc- und Guttapercha-Compagnie bought rubber from Kramrisch, for which they paid the latter's bankers (Kleinwort & Co.), including £1480 more than the debt, through an error. The bankers placed the whole amount to Kramrisch's credit, whereupon the Continental company brought suit against them for the £1480, resulting in a judgment for the plaintiff. F. Reddaway & Co., Limited, were proceeded against by the bankers Kleinwort, in a matter complicated by the failure of Kramrisch, from whom they had bought rubber, a judgment being given to the plaintiffs for £731.

Value of Congo Free State Rubber Exports.

	1898.	1899.	1900.	1901.
State Product.	£634,040	£1,124.036	£1,594,960	£1,758,638
Total	673,850	1,158,940	1,642,586	1,807,327

IMPORTS FROM PARA AT NEW YORK.

[*The Figures Indicate Weights in Pounds.*]

May 4.—By the steamer *Horatio*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total
Poel & Arnold	165,800	53,900	56,700	26,900=	303,300
New York Commercial Co.	69,300	9,300	72,600	....=	151,200
A. T. Morse & Co.	31,400	16,800	51,400	27,600=	127,200
United States Rubber Co.	25,500	5,000	51,900	....=	81,400
Lawrence Johnson & Co.	22,900	3,900	5,300	....=	32,100
William Wright & Co.	6,400	2,400	18,000	....=	26,800
L. Hagenaers & Co.	5,600	.....	2,800	....=	8,400
Edmund Reeks & Co.	2,100	600	1,000	2,000=	5,700
Hagemeyer & Brunn	1,700	300	3,400	....=	5,400
Total	330,700	92,200	262,100	56,500=	741,500

May 13.—By the steamer *Maranhense*, from Manáos and Pará:

Poel & Arnold	130,200	49,100	77,300	87,200=	343,800
A. T. Morse & Co.	119,100	19,900	63,600	81,100=	283,700
New York Commercial Co.	141,400	34,700	45,900	6,700=	228,700
United States Rubber Co.	36,600	6,600	54,600	....=	97,800
Lawrence Johnson & Co.	22,500	2,500	7,000	....=	32,000
Edmund Reeks & Co.	.....	.....	17,600	....=	17,600
William Wright & Co.	.....	.....	16,600	....=	16,600
G. Amsinck & Co.	.....	.....	5,800	9,600=	15,400
L. Hagenaers & Co.	6,400	.....	2,400	....=	8,800
Total	456,200	112,800	273,200	202,200=	1,044,400

May 22.—By the steamer *Sobralense*, from Manáos and Pará:

Poel & Arnold	98,200	33,200	47,900	35,900=	215,200
A. T. Morse & Co.	45,600	14,400	83,100	35,900=	179,000
United States Rubber Co.	55,800	7,700	56,500	42,600=	162,600
New York Commercial Co.	46,000	9,500	36,900	11,600=	104,000
William Wright & Co.	8,500	1,400	14,500	....=	24,400
L. Hagenaers & Co.	6,400	.....	3,000	....=	9,400
Edmund Reeks & Co.	.....—	.....	.....	2,700=	2,700
Total	260,500	66,200	241,900	128,700=	697,300

[NOTE.—The *Amazonense* is due at New York on June 2, with 300 tons of Rubber and 75 tons Caucho.]

PARA RUBBER VIA EUROPE.

	POUNDS.	
APRIL 25.—By the *Campania*=Liverpool:		
Poel & Arnold (Fine)	10,000	
George A. Alden & Co (Fine)	4,000	
William Wright & Co. (Fine)	11,000	
A T. Morse & Co. (Caucho)	20,000	45,000
APRIL 30.—By the *Oceanic*=Liverpool:		
Poel & Arnold (Coarse)		24,000
MAY 1.—By the *Yucatan*=Mollendo:		
Chicago Bolivian Rubber Co. (Fine)	12,000	
Chicago Bolivian Rubber Co. (Coarse)	1,000	13,000
MAY 4.—By the *Umbria*=Liverpool:		
Poel & Arnold (Caucho)	45,000	
George A. Alden & Co. (Fine)	3,000	48,000
MAY 4.—By the *St. Andrew*=Antwerp:		
Otto Meyer (Fine)	31,000	
Otto Meyer (Coarse)	2,000	
Poel & Arnold (Fine)	12,500	45,500
MAY 7.—By the *Teutonic*=Liverpool:		
George A. Alden & Co. (Caucho)		52,009
MAY 9.—By the *Sylvania*=Liverpool:		
Poel & Arnold (Fine)		11,000
MAY 15.—By the *Germanic*=Liverpool:		
George A. Alden & Co. (Fine)		41,000
MAY 21.—By the *Majestic*=Liverpool:		
George A. Alden & Co. (Fine)		68,000
MAY 23.—By the *Campania*=Liverpool:		
George A. Alden & Co. (Fine)		23,000

OTHER ARRIVALS AT NEW YORK

CENTRALS.

APRIL 24.—By the *Majestic*=Liverpool:

	POUNDS.	
George A. Alden & Co	18,000	
Robinson & Tallman	7,000	25,000

APRIL 27.—By the *Monterey*=Mexico:

E. Steiger & Co	2,500	
Thebaud Brothers	1,500	
American Trading Co	1,000	
E. N. Tibbals & Co	200	5,200

APRIL 27.—By the *Tintoretto*=Bahia:

J. H. Rossbach & Bros	17,000	
Booth & Co	3,000	20,000

APRIL 27.—By the *Altai*=Savanilla:

Roldan & Van Sickle	2,000	
J. Ferro	2 000	
United Fruit Co	1,600	
Lawrence Johnson & Co	500	
A. D. Straus & Co	100	6,100

MAY 1.—By *El Dia*=New Orleans:

Manhattan Rubber Mfg. Co	1,500	
A. T. Morse & Co	1,500	
M. A. de Leon	200	3,200

MAY 4.—By the *Umbria*=Liverpool:

Robinson & Tallman		4,500

MAY 1.—By the *Yucatan*=Colon:

Hirzel, Feitman & Co	9,300	
Roldan & Van Sickle	8,300	
Dumarest & Co	7,000	
G. Amsinck & Co	5,700	
A. Santos & Co	3,200	
Lawrence Johnson & Co	3,000	
Fidanque Bros. & Co	2,900	
Piza, Nephews & Co	1,800	
A. M. Capen Sons	1,100	
E. Scheitlin & Co	900	
Joseph Hecht	600	
Ascensio & Cassio	600	
Jimenez & Escobar	500	
Lauman & Kemp	300	
Isaac Brandon & Bros	200	
W. R. Grace & Co	200	45,600

MAY 4.—By the *New York*=London:

George A. Alden & Co	13,500	
Poel & Arnold	8,500	22,000

MAY 7.—By the *Graf Waldersee*=Hamburg:

Robinson & Tallman		44,500

MAY 7.—By the *Hevelius*=Bahia:

J. H. Rossbach & Bros	15,500	
Booth & Co	4,500	20,000

MAY 4.—By the *Havana*=Mexico:

Graham Hinkley & Co	2,000	
H. Marquardt & Co	2,000	
Harburger & Stack	2,000	
Thebaud Bros	800	
L. N. Chemedlin & Co	1,500	
W. Loaiza & Co	1,000	
E. N. Tibbals & Co	500	
E. Steiger & Co	200	
For Hamburg	3,000	13,000

MAY 7.—By the *Alene*=Greytown:

G. Amsinck & Co	1,500	
E. B. Strout	1,500	
Lawrence Johnson & Co	700	
J. A. Pauli & Co	300	4,000

MAY 8.—By the *Allianca*=Colon:

Hirzel, Feitman & Co	9,600	
A. Santos & Co	2,600	
Isaac Brandon & Bros	4,600	
American Trading Co	3,100	
L. Johnson & Co	1,800	
G. Amsinck & Co	1,500	
Fidanque Bros. & Co	1,400	
Eggers & Heinlein	700	
Mecke & Co	900	
Dumarest & Co	600	27,000

MAY 11.—By the *Proteus*=New Orleans:

A. T. Morse & Co	8,800	
Eggers & Heinlein	2,500	
G. Amsinck & Co	1,000	
T. N. Morgan	800	13,100

MAY 12.—By the *Esperanza*=Mexico:

Graham, Hinkley & Co	5,000	
Thebaud Bros	3,000	
Harburger & Stack	2,000	
H. Marquardt & Co	1,500	
L. N. Chemedlin & Co	1,000	
E. N. Tibbals & Co	200	
E. Steiger & Co	300	13,000

MAY 13.—By the *Adirondack*=Savanilla:

G. Amsinck & Co	2,200	
Jimenez & Escobar	1,400	
Lawrence Johnson & Co	1,000	
Kunhardt & Co	400	
Roldan & Van Sickle	300	
J. H. Rossbach & Bros	100	5,400

CENTRALS—Continued.

MAY 14.—By *El Monte*=New Orleans:

Manhattan Rubber Mfg. Co	9,000	
A. T. Morse & Co	8,500	17,500

MAY 15.—By the *Seguranca*=Colon:

Lawrence Johnson & Co	7,000	
G. Amsinck & Co	3,000	
H. Marquardt & Co	2,000	
E. B. Strout	1,500	
American Trading Co	1,300	
Everett, Heaney & Co	500	
R. G. Barthold	600	
Fidanque Bros. & Co	400	
Jimenez & Escobar	300	
Marcus, Mason & Co	300	
Silva Bussenius & Co	200	
Meyer & Hecht	200	
Earle Brothers	100	17,400

MAY 20.—By the *Tennyson*=Bahia:

J. H. Rossbach & Bros	25,000	
Booth & Co	15,000	
Eggers & Heinlein	2,000	42,000

MAY 19.—By the *Valencia*=Cartagena:

Kunhardt & Co	4,500	
American Trading Co	1,500	
E. B. Strout	600	
Andreas & Co	300	
Lawrence Johnson & Co	600	
G. Amsinck & Co	500	
D. A. De Lima & Co	200	8,200

MAY 22.—By the *Saratoga*=Colon:

Roldan & Van Sickle	9,800	
Mecke & Co	3,400	
Isaac Brandon & Bros	2,200	
A. Santos & Co	1,700	
Livingston & Co	1,700	
E. B. Strout	1,100	
G. Amsinck & Co	1,000	
American Trading Co	1,000	
Eggers & Heinlein	800	
Fidanque Bros. & Co	800	
Hirzel, Feitman & Co	400	
Kunhardt & Co	200	
Harburger & Stack	100	24,200

MAY 23.—By the *Monterey*=Mexico:

American Trading Co	1,100	
L. N. Chemedlin & Co	700	
Samuels & Cummings	700	
Graham, Hinkley & Co	500	
E. Steiger & Co	500	
G. Amsinck & Co	200	
For Hamburg	5,000	8,700

AFRICANS.

	POUNDS.	
APRIL 24.—By the *Celtic*=Liverpool:		
A. T. Morse & Co	48,000	
United States Rubber Co	27,000	
George A. Alden & Co	4,500	79,500
APRIL 25.—By the *Campania*=Liverpool:		
Poel & Arnold	51,000	
United States Rubber Co	15,000	
Earle Brothers	4,500	70,500
APRIL 25.—By the *Batavia*=Hamburg:		
Poel & Arnold	30,000	
A. T. Morse & Co	22,00	
George A. Alden & Co	20,000	
William Wright & Co	8 000	
Otto Meyer	11,500	92,000
APRIL 28.—By the *Bovic*=Liverpool:		
Poel & Arnold	56,000	
George A. Alden & Co	22,500	78,500
APRIL 28.—By the *Vaderland*=Antwerp:		
George A. Alden & Co	10 000	
A. T. Morse & Co	4 500	
Poel & Arnold	4,500	19,000
APRIL 29.—By the *Konig Albert*=Genoa:		
Through Shipment		2,500
APRIL 30.—By the *Occanic*=Liverpool:		
George A. Alden & Co	35,000	
Poel & Arnold	34,000	
Otto Meyer	23,000	
A. T. Morse & Co	9,000	101,000
MAY 4.—By the *La Aquitane*=Havre:		
George A. Alden & Co		11,500
MAY 4.—By the *Umbria*=Liverpool:		
Poel & Arnold	27,000	
George A. Alden & Co	37,000	
A. T. Morse & Co	25,000	
Earle Brothers	4,500	93,500
MAY 6.—By the *Menominee*=London:		
Poel & Arnold	12,000	
Robinson & Tallman	4,500	16,500
MAY 6.—By the *Kroonland*=Antwerp:		
Poel & Arnold	10,000	
William Wright & Co	5,000	15,000

AFRICANS—Continued.

MAY 7.—By the *Teutonic*=Liverpool:

George A Alden & Co	22,500	
United States Rubber Co	10,000	
H. A. Gould Co	11,000	43,500

MAY 9.—By the *Sylvania*=Liverpool:

Poel & Arnold	54,000	
George A. Alden & Co	23,000	77,000

MAY 11.—By the *Patria*=Lisbon:

United States Rubber Co	45,000	
A. T. Morse & Co	22,000	67,000

MAY 11—By the *Ivernia*=Liverpool:

Otto Meyer	14,000	
Poel & Arnold	22,000	
William Wright & Co	11,500	
George A. Alden & Co	4,500	
Rubber Trading Co	11,500	63,500

MAY 12.—By the *Zeeland*=Antwerp:

Poel & Arnold	34,000	
A. T. Morse & Co	26,000	
Joseph Cantor	4,500	64,500

MAY 12.—By the *Potsdam*=Rotterdam:

A. T. Morse & Co	22,000	
Poel & Arnold	25,000	
Joseph Cantor	3,500	50,500

MAY 15—By the *Germanic*=Liverpool:

George A. Alden & Co	42,000	
A. T. Morse & Co	33,000	
United States Rubber Co	33,500	
Poel & Arnold	5,500	114,000

MAY 18.—By the *Etruria*=Liverpool:

George A. Alden & Co	45,000	
Poel & Arnold	23,000	
Otto Meyer	3,000	
Rubber Trading Co	8,000	
A. T. Morse & Co	11,000	90,000

MAY 18.—By the *Augusta Victoria*=Hamburg:

A. T. Morse & Co	34,000	
Poel & Arnold	30,000	
Otto Meyer	30,000	
William Wright & Co	5,500	99,500

MAY 21.—By the *Aurania*=Liverpool:

Poel & Arnold		70,000

MAY 21.—By the *Majestic*=Liverpool:

George A. Alden & Co	70,000	
Poel & Arnold	4,500	
Joseph Cantor	2,000	76,500

MAY 21.—By the *Pennsylvania*=Hamburg:

George A. Alden & Co	60 000	
Otto Meyer	40,000	100,000

EAST INDIAN.

	POUNDS.	
APRIL 27.—By the *St. Paul*=London:		
Poel & Arnold		10,000
MAY 11.—By the *Indradeo*=Singapore:		
William Wright & Co		11,500
PONTIANAK.		
MAY 11.—By the *Shrinosa*=Singapore:		
William Wright & Co	300,000	
Poel & Arnold	120,000	
Robert Branss & Co	100,000	
George A. Alden & Co	110,000	630,000
MAY 11—By the *Indradeo*=Singapore:		
William Wright & Co	400,000	
Robert Branss & Co	115,000	515,000

GUTTA-PERCHA AND BALATA.

	POUNDS.	
APRIL 25.—By the *Batavia*=Hamburg:		
To order		7,500
MAY 7.—By the *Graf Waldersee*=Hamburg:		
To order		13,000
MAY 11.—By the *Shrinosa*=Singapore:		
Robert Branss & Co		23,000
MAY 11.—By the *Indradeo*=Singapore:		
To order		11,500
MAY 15.—By the *Pennsylvania*=Hamburg:		
To order		6,500
BALATA.		
MAY 2.—By the *Grenada*=Trinidad:		
For Europe	1,500	
Cadenas & Coe	500	2,000
MAY 7.—By the *Graf Waldersee*=Hamburg:		
To order		2,500
MAY 13.—By the *Maranhense*=Pará:		
New York Commercial Co		2,000

CUSTOM HOUSE STATISTICS.

PORT OF NEW YORK—APRIL.

	POUNDS.	VALUE.
Imports:		
India-rubber	6,311,788	$3,781,584
Gutta-percha	36,135	42,078
Gutta-jelutong (Pontianak)	963,844	24,194
Total	7,334,767	$3,847,806
Exports:		
India-rubber	35,614	$ 27,614
Reclaimed rubber	98,437	12,579
Rubber Scrap Imported	1,931,472	$120 331

BOSTON ARRIVALS.

	POUNDS
APRIL 1.—By the *Michigan*=Liverpool:	
George A. Alden & Co.—African	12,125
APRIL 3.—By the *Winifredian*=Liverpool:	
George A. Alden & Co.—African	4,630
APRIL 4.—By the *Saxonia*=Liverpool:	
Poel & Arnold—African	25,094
APRIL 6.—By the *Saxonia*=Liverpool:	
George A. Alden & Co.—African	3,531
APRIL 10.—By the *Philadelphian*=London:	
George A. Alden & Co.—East Indian	14 253
APRIL 14.—By the *Sylvania*=Liverpool:	
George A. Alden & Co.—African	3,364
APRIL 21.—By the *Sagamore*=Liverpool:	
George A. Alden & Co.—African	13,090
APRIL 23.—By the *Cestrian*=Liverpool:	
Poel & Arnold—African	19,973
APRIL 28.—By the *Pinemore*=Antwerp:	
George A. Alden & Co.—African	17,259
Total Imports	112,719

[Value, $67,234.]

APRIL EXPORTS OF INDIA-RUBBER FROM PARA (IN KILOGRAMS).

1000 KILOGRAMS=2204.6 POUNDS.

EXPORTERS.	UNITED STATES.					EUROPE.					TOTAL
	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	
Cmok, Schrader & Co.	84.577	16,207	47.728	5,630	154,142	120,051	8,570	35,167	35.534	199.322	353.464
Frank da Costa & Co.	45.560	7,838	139,449	8,057	200,904	66,566	8,416	17,680	4,500	97,162	298,066
Adelbert H. Alden	46,850	13,080	51,510	—	111.440	18,780	1,550	4,653	3,674	28,657	140,097
Kanthack & Co.	5.705	2,232	4 904	—	12,841	3,904	202	6,933	—	11,039	23,880
Neale & Staats	—	—	7,552	—	7,552	—	64	660	—	724	8,276
Denis Crouan & Co.	496	—	2,578	—	3,074	—	—	—	—	—	3,074
Pires, Teixeira & Co.	8.729	—	4.274	—	13,003	3,039	—	1,255	—	4.294	17,297
Sundry small shippers	—	—	—	—	—	6,478	124	7,116	2,348	16,066	16,066
Direct from Iquitos	—	—	—	—	—	18,282	4,039	15,109	88,861	126,291	126,291
Direct from Manáos	345,147	106,756	151,816	192,544	796,263	425,340	41,584	124.123	238,591	829,638	1,625,901
Total for April	537,064	146,113	409,811	206,231	1,299,219	662,440	64,549	212,696	373,508	1,313,193	2,612,412
Total for January-March	2,839,418	703,870	1,738,268	453,623	5,735,179	3,251,190	413.177	806,893	1,200,280	5,671,540	11,406,719
Total, July-December	2,724,574	649,906	2,172,215	78,623	5,625,318	4,011,602	609,423	1,113,862	500,474	6,235,361	11,860,679
TOTAL, CROP YEAR	6,101,056	1,499,889	4,320,294	738,477	12.659.716	7,925,232	1,087,149	2,133,451	2,074,262	13,220,094	25,879,810

OFFICIAL STATISTICS OF CRUDE INDIA-RUBBER (IN POUNDS).

UNITED STATES.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
March, 1903	5,470,028	357,570	5,112,458
January-February	10,727,780	511,395	10,216,385
Three months, 1903	16,197,808	868,965	15,328,843
Three months, 1902	14,505.944	940,675	13,565,269
Three months, 1901	15,886,510	850,607	15.035.903

GREAT BRITAIN.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
March, 1903	6,046,208	3.121,104	2,925,104
January-February	9,644,096	6,760.544	2,883.552
Three months, 1903	15.690,304	9,881,648	5,808,656
Three months, 1902	13,880,608	7,175,616	6,704.992
Three months, 1901	14.823.872	4.727.632	10 096,240

GERMANY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
March, 1903	3.885,420	1,331,440	2,553,980
January-February	5.566,220	2,151,820	3,414,400
Three months, 1903	9,451,640	3.483,260	5,968,380
Three months, 1902	7,036,700	2,682,020	4,354.680
Three months, 1901	6,482,080	1,321,540	5,160,540

ITALY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
March, 1903			
January-February			
Three months, 1903			
Three months, 1902	370,260	42,460	327,800
Three months, 1901	479,160	69,080	410,080

FRANCE.*

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
March, 1903	1,438,140	534,600	903,540
January-February	2.399,540	1,567,280	832,260
Three months, 1903	3,837,680	2,101,880	1,735,800
Three months, 1902	5,305,300	2,030,160	3,275,140
Three months, 1901	4,555,100	2,262,260	2,292,840

AUSTRIA-HUNGARY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
March, 1903	264,880	8,360	256,520
January-February	477,180	440	476,740
Three months, 1903	742,060	8,800	733,260
Three months, 1902	642,620	660	641,960
Three months, 1901	572.440	7,040	565.400

BELGIUM.†

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
March, 1903	1,443.160	1,201,101	242,059
January-February	2,093,723	1,360,986	732,737
Three months, 1903	3,536,883	2,562,087	974,796
Three months, 1902	4,355,109	2,299,453	2,055,656
Three months, 1901	3.731,035	2,438,102	1,292,933

NOTE.—German statistics include Gutta-percha, Balata, old rubber, and substitutes. French, Austrian, and Italian figures include Gutta-percha. The exports from the United States embrace the supplies for Canadian consumption.

* General Commerce. † Special Commerce.